



Sequence Listing

<120> COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
TREATMENT OF TUMOR

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His	Ala	Lys	Asp	Pro	Asp	Ala	Ala	Asn	Ser	Pro	Ile	Arg	Tyr	Ser
				410					415					420
Ile	Asp	Arg	His	Thr	Asp	Leu	Asp	Arg	Phe	Phe	Thr	Ile	Asn	Pro
				425					430					435
Glu	Asp	Gly	Phe	Ile	Lys	Thr	Thr	Lys	Pro	Leu	Asp	Arg	Glu	Glu
				440					445					450
Thr	Ala	Trp	Leu	Asn	Ile	Thr	Val	Phe	Ala	Ala	Glu	Ile	His	Asn
				455					460					465
Arg	His	Gln	Glu	Ala	Gln	Val	Pro	Val	Ala	Ile	Arg	Val	Leu	Asp
				470					475					480
Val	Asn	Asp	Asn	Ala	Pro	Lys	Phe	Ala	Ala	Pro	Tyr	Glu	Gly	Phe
				485					490					495
Ile	Cys	Glu	Ser	Asp	Gln	Thr	Lys	Pro	Leu	Ser	Asn	Gln	Pro	Ile
				500					505					510
Val	Thr	Ile	Ser	Ala	Asp	Asp	Lys	Asp	Asp	Thr	Ala	Asn	Gly	Pro
				515					520					525
Arg	Phe	Ile	Phe	Ser	Leu	Pro	Pro	Glu	Ile	Ile	His	Asn	Pro	Asn
				530					535					540
Phe	Thr	Val	Arg	Asp	Asn	Arg	Asp	Asn	Thr	Ala	Gly	Val	Tyr	Ala
				545					550					555
Arg	Arg	Gly	Gly	Phe	Ser	Arg	Gln	Lys	Gln	Asp	Leu	Tyr	Leu	Leu
				560					565					570
Pro	Ile	Val	Ile	Ser	Asp	Gly	Gly	Ile	Pro	Pro	Met	Ser	Ser	Thr
				575					580					585

Asn Thr Leu Thr	Ile Lys Val Cys Gly	Cys Asp Val Asn Gly	Ala
590		595	600
Leu Leu Ser Cys	Asn Ala Glu Ala Tyr	Ile Leu Asn Ala Gly	Leu
605		610	615
Ser Thr Gly Ala	Leu Ile Ala Ile Leu	Ala Cys Ile Val Ile	Leu
620		625	630
Leu Val Ile Val	Val Leu Phe Val Thr	Leu Arg Arg Gln Lys	Lys
635		640	645
Glu Pro Leu Ile	Val Phe Glu Glu Glu	Asp Val Arg Glu Asn	Ile
650		655	660
Ile Thr Tyr Asp	Asp Glu Gly Gly Gly	Glu Glu Asp Thr Glu	Ala
665		670	675
Phe Asp Ile Ala	Thr Leu Gln Asn Pro	Asp Gly Ile Asn Gly	Phe
680		685	690
Ile Pro Arg Lys	Asp Ile Lys Pro Glu	Tyr Gln Tyr Met Pro	Arg
695		700	705
Pro Gly Leu Arg	Pro Ala Pro Asn Ser	Val Asp Val Asp Asp	Phe
710		715	720
Ile Asn Thr Arg	Ile Gln Glu Ala Asp	Asn Asp Pro Thr Ala	Pro
725		730	735
Pro Tyr Asp Ser	Ile Gln Ile Tyr Gly	Tyr Glu Gly Arg Gly	Ser
740		745	750
Val Ala Gly Ser	Leu Ser Ser Leu Glu	Ser Ala Thr Thr Asp	Ser
755		760	765
Asp Leu Asp Tyr	Asp Tyr Leu Gln Asn	Trp Gly Pro Arg Phe	Lys
770		775	780
Lys Leu Ala Asp	Leu Tyr Gly Ser Lys	Asp Thr Phe Asp Asp	Asp
785		790	795

Ser

<210> 23
 <211> 215
 <212> PRT
 <213> Homo sapien

<400> 23
 Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Leu Gly
 1 5 10 15
 Ile Gln Leu Thr Ala Leu Trp Pro Ile Ala Ala Val Glu Ile Tyr
 20 25 30
 Thr Ser Arg Val Leu Glu Ala Val Asn Gly Thr Asp Ala Arg Leu

	35		40		45
Lys Cys Thr Phe Ser Ser Phe Ala Pro Val Gly Asp Ala Leu Thr	50		55		60
Val Thr Trp Asn Phe Arg Pro Leu Asp Gly Gly Pro Glu Gln Phe	65		70		75
Val Phe Tyr Tyr His Ile Asp Pro Phe Gln Pro Met Ser Gly Arg	80		85		90
Phe Lys Asp Arg Val Ser Trp Asp Gly Asn Pro Glu Arg Tyr Asp	95		100		105
Ala Ser Ile Leu Leu Trp Lys Leu Gln Phe Asp Asp Asn Gly Thr	110		115		120
Tyr Thr Cys Gln Val Lys Asn Pro Pro Asp Val Asp Gly Val Ile	125		130		135
Gly Glu Ile Arg Leu Ser Val Val His Thr Val Arg Phe Ser Glu	140		145		150
Ile His Phe Leu Ala Leu Ala Ile Gly Ser Ala Cys Ala Leu Met	155		160		165
Ile Ile Ile Val Ile Val Val Val Leu Phe Gln His Tyr Arg Lys	170		175		180
Lys Arg Trp Ala Glu Arg Ala His Lys Val Val Glu Ile Lys Ser	185		190		195
Lys Glu Glu Glu Arg Leu Asn Gln Glu Lys Lys Val Ser Val Tyr	200		205		210
Leu Glu Asp Thr Asp	215				

<210> 24
 <211> 796
 <212> PRT
 <213> Homo sapien

<400> 24
 Met Lys Glu Asn Tyr Cys Leu Gln Ala Ala Leu Val Cys Leu Gly
 1 5 10 15
 Met Leu Cys His Ser His Ala Phe Ala Pro Glu Arg Arg Gly His
 20 25 30
 Leu Arg Pro Ser Phe His Gly His His Glu Lys Gly Lys Glu Gly
 35 40 45
 Gln Val Leu Gln Arg Ser Lys Arg Gly Trp Val Trp Asn Gln Phe
 50 55 60
 Phe Val Ile Glu Glu Tyr Thr Gly Pro Asp Pro Val Leu Val Gly
 65 70 75

Arg Leu His Ser Asp Ile Asp Ser Gly Asp Gly Asn Ile Lys Tyr	80	85	90
Ile Leu Ser Gly Glu Gly Ala Gly Thr Ile Phe Val Ile Asp Asp	95	100	105
Lys Ser Gly Asn Ile His Ala Thr Lys Thr Leu Asp Arg Glu Glu	110	115	120
Arg Ala Gln Tyr Thr Leu Met Ala Gln Ala Val Asp Arg Asp Thr	125	130	135
Asn Arg Pro Leu Glu Pro Pro Ser Glu Phe Ile Val Lys Val Gln	140	145	150
Asp Ile Asn Asp Asn Pro Pro Glu Phe Leu His Glu Thr Tyr His	155	160	165
Ala Asn Val Pro Glu Arg Ser Asn Val Gly Thr Ser Val Ile Gln	170	175	180
Val Thr Ala Ser Asp Ala Asp Asp Pro Thr Tyr Gly Asn Ser Ala	185	190	195
Lys Leu Val Tyr Ser Ile Leu Glu Gly Gln Pro Tyr Phe Ser Val	200	205	210
Glu Ala Gln Thr Gly Ile Ile Arg Thr Ala Leu Pro Asn Met Asp	215	220	225
Arg Glu Ala Lys Glu Glu Tyr His Val Val Ile Gln Ala Lys Asp	230	235	240
Met Gly Gly His Met Gly Gly Leu Ser Gly Thr Thr Lys Val Thr	245	250	255
Ile Thr Leu Thr Asp Val Asn Asp Asn Pro Pro Lys Phe Pro Gln	260	265	270
Arg Leu Tyr Gln Met Ser Val Ser Glu Ala Ala Val Pro Gly Glu	275	280	285
Glu Val Gly Arg Val Lys Ala Lys Asp Pro Asp Ile Gly Glu Asn	290	295	300
Gly Leu Val Thr Tyr Asn Ile Val Asp Gly Asp Gly Met Glu Ser	305	310	315
Phe Glu Ile Thr Thr Asp Tyr Glu Thr Gln Glu Gly Val Ile Lys	320	325	330
Leu Lys Lys Pro Val Asp Phe Glu Thr Glu Arg Ala Tyr Ser Leu	335	340	345
Lys Val Glu Ala Ala Asn Val His Ile Asp Pro Lys Phe Ile Ser	350	355	360
Asn Gly Pro Phe Lys Asp Thr Val Thr Val Lys Ile Ser Val Glu			

365	370	375
Asp Ala Asp Glu Pro Pro Met Phe Leu	Ala Pro Ser Tyr Ile His	
380	385	390
Glu Val Gln Glu Asn Ala Ala Ala Gly	Thr Val Val Gly Arg Val	
395	400	405
His Ala Lys Asp Pro Asp Ala Ala Asn	Ser Pro Ile Arg Tyr Ser	
410	415	420
Ile Asp Arg His Thr Asp Leu Asp Arg	Phe Phe Thr Ile Asn Pro	
425	430	435
Glu Asp Gly Phe Ile Lys Thr Thr Lys	Pro Leu Asp Arg Glu Glu	
440	445	450
Thr Ala Trp Leu Asn Ile Thr Val Phe	Ala Ala Glu Ile His Asn	
455	460	465
Arg His Gln Glu Ala Gln Val Pro Val	Ala Ile Arg Val Leu Asp	
470	475	480
Val Asn Asp Asn Ala Pro Lys Phe Ala	Ala Pro Tyr Glu Gly Phe	
485	490	495
Ile Cys Glu Ser Asp Gln Thr Lys Pro	Leu Ser Asn Gln Pro Ile	
500	505	510
Val Thr Ile Ser Ala Asp Asp Lys Asp	Asp Thr Ala Asn Gly Pro	
515	520	525
Arg Phe Ile Phe Ser Leu Pro Pro Glu	Ile Ile His Asn Pro Asn	
530	535	540
Phe Thr Val Arg Asp Asn Arg Asp Asn	Thr Ala Gly Val Tyr Ala	
545	550	555
Arg Arg Gly Gly Phe Ser Arg Gln Lys	Gln Asp Leu Tyr Leu Leu	
560	565	570
Pro Ile Val Ile Ser Asp Gly Gly Ile	Pro Pro Met Ser Ser Thr	
575	580	585
Asn Thr Leu Thr Ile Lys Val Cys Gly	Cys Asp Val Asn Gly Ala	
590	595	600
Leu Leu Ser Cys Asn Ala Glu Ala Tyr	Ile Leu Asn Ala Gly Leu	
605	610	615
Ser Thr Gly Ala Leu Ile Ala Ile Leu	Ala Cys Ile Val Ile Leu	
620	625	630
Leu Val Ile Val Val Leu Phe Val Thr	Leu Arg Arg Gln Lys Lys	
635	640	645
Glu Pro Leu Ile Val Phe Glu Glu Glu	Asp Val Arg Glu Asn Ile	
650	655	660

Ile	Thr	Tyr	Asp	Asp	Glu	Gly	Gly	Gly	Glu	Glu	Asp	Thr	Glu	Ala	665	670	675
Phe	Asp	Ile	Ala	Thr	Leu	Gln	Asn	Pro	Asp	Gly	Ile	Asn	Gly	Phe	680	685	690
Ile	Pro	Arg	Lys	Asp	Ile	Lys	Pro	Glu	Tyr	Gln	Tyr	Met	Pro	Arg	695	700	705
Pro	Gly	Leu	Arg	Pro	Ala	Pro	Asn	Ser	Val	Asp	Val	Asp	Asp	Phe	710	715	720
Ile	Asn	Thr	Arg	Ile	Gln	Glu	Ala	Asp	Asn	Asp	Pro	Thr	Ala	Pro	725	730	735
Pro	Tyr	Asp	Ser	Ile	Gln	Ile	Tyr	Gly	Tyr	Glu	Gly	Arg	Gly	Ser	740	745	750
Val	Ala	Gly	Ser	Leu	Ser	Ser	Leu	Glu	Ser	Ala	Thr	Thr	Asp	Ser	755	760	765
Asp	Leu	Asp	Tyr	Asp	Tyr	Leu	Gln	Asn	Trp	Gly	Pro	Arg	Phe	Lys	770	775	780
Lys	Leu	Ala	Asp	Leu	Tyr	Gly	Ser	Lys	Asp	Thr	Phe	Asp	Asp	Asp	785	790	795

Ser

<210> 25
 <211> 123
 <212> PRT
 <213> Homo sapien

Met	Ala	Thr	Ala	Ala	Gly	Ala	Thr	Tyr	Phe	Gln	Arg	Gly	Ser	Leu	1	5	10	15
Phe	Trp	Phe	Thr	Val	Ile	Thr	Leu	Ser	Phe	Gly	Tyr	Tyr	Thr	Trp	20	25	30	
Val	Val	Phe	Trp	Pro	Gln	Ser	Ile	Pro	Tyr	Gln	Asn	Leu	Gly	Pro	35	40	45	
Leu	Gly	Pro	Phe	Thr	Gln	Tyr	Leu	Val	Asp	His	His	His	Thr	Leu	50	55	60	
Leu	Cys	Asn	Gly	Tyr	Trp	Leu	Ala	Trp	Leu	Ile	His	Val	Gly	Glu	65	70	75	
Ser	Leu	Tyr	Ala	Ile	Ala	Leu	Cys	Lys	His	Lys	Gly	Ile	Thr	Ser	80	85	90	
Gly	Arg	Ala	Gln	Leu	Leu	Trp	Phe	Leu	Gln	Thr	Phe	Phe	Phe	Gly	95	100	105	
Ile	Ala	Ser	Leu	Thr	Ile	Leu	Ile	Ala	Tyr	Lys	Arg	Lys	Arg	Gln				

110

115

120

Lys Gln Thr

<210> 26

<211> 257

<212> PRT

<213> Homo sapien

<400> 26

Met	Ala	Ser	Lys	Ile	Gly	Ser	Arg	Arg	Trp	Met	Leu	Gln	Leu	Ile
1				5					10					15

Met	Gln	Leu	Gly	Ser	Val	Leu	Leu	Thr	Arg	Cys	Pro	Phe	Trp	Gly
				20					25					30

Cys	Phe	Ser	Gln	Leu	Met	Leu	Tyr	Ala	Glu	Arg	Ala	Glu	Ala	Arg
				35					40					45

Arg	Lys	Pro	Asp	Ile	Pro	Val	Pro	Tyr	Leu	Tyr	Phe	Asp	Met	Gly
				50					55					60

Ala	Ala	Val	Leu	Cys	Ala	Ser	Phe	Met	Ser	Phe	Gly	Val	Lys	Arg
				65					70					75

Arg	Trp	Phe	Ala	Leu	Gly	Ala	Ala	Leu	Gln	Leu	Ala	Ile	Ser	Thr
				80					85					90

Tyr	Ala	Ala	Tyr	Ile	Gly	Gly	Tyr	Val	His	Tyr	Gly	Asp	Trp	Leu
				95					100					105

Lys	Val	Arg	Met	Tyr	Ser	Arg	Thr	Val	Ala	Ile	Ile	Gly	Gly	Phe
				110					115					120

Leu	Val	Leu	Ala	Ser	Gly	Ala	Gly	Glu	Leu	Tyr	Arg	Arg	Lys	Pro
				125					130					135

Arg	Ser	Arg	Ser	Leu	Gln	Ser	Thr	Gly	Gln	Val	Phe	Leu	Gly	Ile
				140					145					150

Tyr	Leu	Ile	Cys	Val	Ala	Tyr	Ser	Leu	Gln	His	Ser	Lys	Glu	Asp
				155					160					165

Arg	Leu	Ala	Tyr	Leu	Asn	His	Leu	Pro	Gly	Gly	Glu	Leu	Met	Ile
				170					175					180

Gln	Leu	Phe	Phe	Val	Leu	Tyr	Gly	Ile	Leu	Ala	Leu	Ala	Phe	Leu
				185					190					195

Ser	Gly	Tyr	Tyr	Val	Thr	Leu	Ala	Ala	Gln	Ile	Leu	Ala	Val	Leu
				200					205					210

Leu	Pro	Pro	Val	Met	Leu	Leu	Ile	Asp	Gly	Asn	Val	Ala	Tyr	Trp
				215					220					225

His	Asn	Thr	Arg	Arg	Val	Glu	Phe	Trp	Asn	Gln	Met	Lys	Leu	Leu
				230					235					240

Gly	Glu	Ser	Val	Gly	Ile	Phe	Gly	Thr	Ala	Val	Ile	Leu	Ala	Thr
				245					250					255

Asp Gly

<210> 27
 <211> 460
 <212> PRT
 <213> Homo sapien

<220>
 <221> Unsure
 <222> 381
 <223> Unknown amino acid

<400> 27

Gly	Arg	Gly	Ser	Pro	Leu	Ala	Leu	Leu	Ile	Arg	Met	Lys	Thr	Leu
1				5					10					15
Leu	Phe	Gly	Val	Trp	Ala	Leu	Leu	Ala	Leu	Ile	Leu	Cys	Pro	Gly
			20						25					30
Val	Pro	Glu	Glu	Leu	Phe	Glu	Val	Ser	Ile	Trp	Pro	Ser	Gln	Ala
			35						40					45
Leu	Val	Glu	Phe	Gly	Gln	Ser	Leu	Val	Cys	Asn	Cys	Ser	Thr	Thr
			50						55					60
Cys	Pro	Asp	Pro	Gly	Pro	Ser	Gly	Ile	Glu	Thr	Phe	Leu	Lys	Lys
			65						70					75
Thr	Gln	Val	Asp	Lys	Gly	Pro	Gln	Trp	Lys	Glu	Phe	Leu	Leu	Glu
			80						85					90
Asp	Val	Thr	Glu	Asn	Ser	Ile	Leu	Gln	Cys	Phe	Phe	Ser	Cys	Ala
			95						100					105
Gly	Ile	Gln	Lys	Asp	Thr	Ser	Leu	Gly	Ile	Thr	Val	Tyr	Gln	Pro
			110						115					120
Pro	Glu	Gln	Val	Ile	Leu	Glu	Leu	Gln	Pro	Ala	Trp	Val	Ala	Val
			125						130					135
Asp	Glu	Ala	Phe	Thr	Val	Lys	Cys	His	Val	Pro	Ser	Val	Ala	Pro
			140						145					150
Leu	Glu	Ser	Leu	Thr	Leu	Ala	Leu	Leu	Gln	Gly	Asn	Gln	Glu	Leu
			155						160					165
His	Arg	Lys	Asn	Phe	Thr	Ser	Leu	Ala	Val	Ala	Ser	Gln	Arg	Ala
			170						175					180
Glu	Val	Ile	Ile	Ser	Val	Arg	Ala	Gln	Lys	Glu	Asn	Asp	Arg	Cys
			185						190					195
Asn	Ser	Ser	Cys	His	Ala	Glu	Leu	Asp	Leu	Ser	Leu	Gln	Gly	Gly
			200						205					210

Arg	Leu	Phe	Gln	Gly	Ser	Ser	Pro	Ile	Arg	Ile	Val	Arg	Ile	Phe
				215					220					225
Glu	Phe	Ser	Gln	Ser	Pro	His	Ile	Trp	Val	Ser	Ser	Leu	Leu	Glu
				230					235					240
Ala	Gly	Met	Ala	Glu	Thr	Val	Ser	Cys	Glu	Val	Ala	Arg	Val	Phe
				245					250					255
Pro	Ala	Lys	Glu	Val	Met	Phe	His	Met	Phe	Leu	Glu	Asp	Gln	Glu
				260					265					270
Leu	Ser	Ser	Ser	Leu	Ser	Trp	Glu	Gly	Asp	Thr	Ala	Trp	Ala	Asn
				275					280					285
Ala	Thr	Ile	Arg	Thr	Met	Glu	Ala	Gly	Asp	Gln	Glu	Leu	Ser	Cys
				290					295					300
Phe	Ala	Ser	Leu	Gly	Ala	Met	Glu	Gln	Lys	Thr	Arg	Lys	Leu	Val
				305					310					315
His	Ser	Tyr	Ser	Phe	Pro	Pro	Pro	Ile	Leu	Glu	Leu	Lys	Glu	Ser
				320					325					330
Tyr	Pro	Leu	Ala	Gly	Thr	Asp	Ile	Asn	Val	Thr	Cys	Ser	Gly	His
				335					340					345
Val	Leu	Thr	Ser	Pro	Ser	Pro	Thr	Leu	Arg	Leu	Gln	Gly	Ala	Pro
				350					355					360
Asp	Leu	Pro	Ala	Gly	Glu	Pro	Ala	Trp	Leu	Leu	Leu	Thr	Ala	Arg
				365					370					375
Glu	Glu	Asp	Asp	Gly	Xaa	Asn	Phe	Ser	Cys	Glu	Ala	Ser	Leu	Val
				380					385					390
Val	Gln	Gly	Gln	Arg	Leu	Met	Lys	Thr	Thr	Val	Ile	Gln	Leu	His
				395					400					405
Ile	Leu	Lys	Pro	Gln	Leu	Glu	Glu	Ser	Ser	Cys	Pro	Gly	Lys	Gln
				410					415					420
Thr	Trp	Leu	Glu	Gly	Met	Glu	His	Thr	Leu	Ala	Cys	Val	Pro	Lys
				425					430					435
Gly	Asn	Pro	Ala	Pro	Ala	Leu	Val	Cys	Thr	Trp	Asn	Gly	Val	Val
				440					445					450
Phe	Asp	Leu	Glu	Val	Pro	Gln	Lys	Ala	Thr					
				455					460					

<210> 28

<211> 332

<212> PRT

<213> Homo sapien

<400> 28

Met Leu Pro Arg Leu Leu Leu Ile Cys Ala Pro Leu Cys Glu

1	5	10	15
Pro Ala Glu Leu Phe	Leu Ile Ala Ser	Pro Ser His Pro Thr	Glu
20		25	30
Gly Ser Pro Val Thr	Leu Thr Cys Lys	Met Pro Phe Leu Gln	Ser
35		40	45
Ser Asp Ala Gln Phe	Gln Phe Cys Phe	Phe Arg Asp Thr Arg	Ala
50		55	60
Leu Gly Pro Gly Trp	Ser Ser Ser Pro	Lys Leu Gln Ile Ala	Ala
65		70	75
Met Trp Lys Glu Asp	Thr Gly Ser Tyr	Trp Cys Glu Ala Gln	Thr
80		85	90
Met Ala Ser Lys Val	Leu Arg Ser Arg	Arg Ser Gln Ile Asn	Val
95		100	105
His Ile Pro Val Ser	Arg Pro Ile Leu	Met Leu Arg Ala Pro	Arg
110		115	120
Ala Gln Ala Ala Val	Glu Asp Val Leu	Glu Leu His Cys Glu	Ala
125		130	135
Leu Arg Gly Ser Pro	Pro Ile Leu Tyr	Trp Phe Tyr His Glu	Asp
140		145	150
Ile Thr Leu Gly Ser	Arg Ser Ala Pro	Ser Gly Gly Gly Ala	Ser
155		160	165
Phe Asn Leu Ser Leu	Thr Glu Glu His	Ser Gly Asn Tyr Ser	Cys
170		175	180
Glu Ala Asn Asn Gly	Leu Gly Ala Gln	Arg Ser Glu Ala Val	Thr
185		190	195
Leu Asn Phe Thr Val	Pro Thr Gly Ala	Arg Ser Asn His Leu	Thr
200		205	210
Ser Gly Val Ile Glu	Gly Leu Leu Ser	Thr Leu Gly Pro Ala	Thr
215		220	225
Val Ala Leu Leu Phe	Cys Tyr Gly Leu	Lys Arg Lys Ile Gly	Arg
230		235	240
Arg Ser Ala Arg Asp	Pro Leu Arg Ser	Leu Pro Ala Leu Pro	Gln
245		250	255
Glu Phe Thr Tyr Leu	Asn Ser Pro Thr	Pro Gly Gln Leu Gln	Pro
260		265	270
Ile Tyr Glu Asn Val	Asn Val Val Ser	Gly Asp Glu Val Tyr	Ser
275		280	285
Leu Ala Tyr Tyr Asn	Gln Pro Glu Gln	Glu Ser Val Ala Ala	Glu
290		295	300

Thr Leu Gly Thr His Met Glu Asp Lys Val Ser Leu Asp Ile Tyr
305 310 315

Ser Arg Leu Arg Lys Ala Asn Ile Thr Asp Val Asp Tyr Glu Asp
320 325 330

Ala Met

<210> 29

<211> 515

<212> PRT

<213> Homo sapien

<400> 29

Met Leu Leu Trp Ala Ser Leu Leu Ala Phe Ala Pro Val Cys Gly
1 5 10 15

Gln Ser Ala Ala Ala His Lys Pro Val Ile Ser Val His Pro Pro
20 25 30

Trp Thr Thr Phe Phe Lys Gly Glu Arg Val Thr Leu Thr Cys Asn
35 40 45

Gly Phe Gln Phe Tyr Ala Thr Glu Lys Thr Thr Trp Tyr His Arg
50 55 60

His Tyr Trp Gly Glu Lys Leu Thr Leu Thr Pro Gly Asn Thr Leu
65 70 75

Glu Val Arg Glu Ser Gly Leu Tyr Arg Cys Gln Ala Arg Gly Ser
80 85 90

Pro Arg Ser Asn Pro Val Arg Leu Leu Phe Ser Ser Asp Ser Leu
95 100 105

Ile Leu Gln Ala Pro Tyr Ser Val Phe Glu Gly Asp Thr Leu Val
110 115 120

Leu Arg Cys His Arg Arg Arg Lys Glu Lys Leu Thr Ala Val Lys
125 130 135

Tyr Thr Trp Asn Gly Asn Ile Leu Ser Ile Ser Asn Lys Ser Trp
140 145 150

Asp Leu Leu Ile Pro Gln Ala Ser Ser Asn Asn Asn Gly Asn Tyr
155 160 165

Arg Cys Ile Gly Tyr Gly Asp Glu Asn Asp Val Phe Arg Ser Asn
170 175 180

Phe Lys Ile Ile Lys Ile Gln Glu Leu Phe Pro His Pro Glu Leu
185 190 195

Lys Ala Thr Asp Ser Gln Pro Thr Glu Gly Asn Ser Val Asn Leu
200 205 210

Ser Cys Glu Thr Gln Leu Pro Pro Glu Arg Ser Asp Thr Pro Leu

215					220					225				
His	Phe	Asn	Phe	Phe	Arg	Asp	Gly	Glu	Val	Ile	Leu	Ser	Asp	Trp
			230						235				240	
Ser	Thr	Tyr	Pro	Glu	Leu	Gln	Leu	Pro	Thr	Val	Trp	Arg	Glu	Asn
				245					250				255	
Ser	Gly	Ser	Tyr	Trp	Cys	Gly	Ala	Glu	Thr	Val	Arg	Gly	Asn	Ile
				260					265				270	
His	Lys	His	Ser	Pro	Ser	Leu	Gln	Ile	His	Val	Gln	Arg	Ile	Pro
				275					280				285	
Val	Ser	Gly	Val	Leu	Leu	Glu	Thr	Gln	Pro	Ser	Gly	Gly	Gln	Ala
				290					295				300	
Val	Glu	Gly	Glu	Met	Leu	Val	Leu	Val	Cys	Ser	Val	Ala	Glu	Gly
				305					310				315	
Thr	Gly	Asp	Thr	Thr	Phe	Ser	Trp	His	Arg	Glu	Asp	Met	Gln	Glu
				320					325				330	
Ser	Leu	Gly	Arg	Lys	Thr	Gln	Arg	Ser	Leu	Arg	Ala	Glu	Leu	Glu
				335					340				345	
Leu	Pro	Ala	Ile	Arg	Gln	Ser	His	Ala	Gly	Gly	Tyr	Tyr	Cys	Thr
				350					355				360	
Ala	Asp	Asn	Ser	Tyr	Gly	Pro	Val	Gln	Ser	Met	Val	Leu	Asn	Val
				365					370				375	
Thr	Val	Arg	Glu	Thr	Pro	Gly	Asn	Arg	Asp	Gly	Leu	Val	Ala	Ala
				380					385				390	
Gly	Ala	Thr	Gly	Gly	Leu	Leu	Ser	Ala	Leu	Leu	Leu	Ala	Val	Ala
				395					400				405	
Leu	Leu	Phe	His	Cys	Trp	Arg	Arg	Arg	Lys	Ser	Gly	Val	Gly	Phe
				410					415				420	
Leu	Gly	Asp	Glu	Thr	Arg	Leu	Pro	Pro	Ala	Pro	Gly	Pro	Gly	Glu
				425					430				435	
Ser	Ser	His	Ser	Ile	Cys	Pro	Ala	Gln	Val	Glu	Leu	Gln	Ser	Leu
				440					445				450	
Tyr	Val	Asp	Val	His	Pro	Lys	Lys	Gly	Asp	Leu	Val	Tyr	Ser	Glu
				455					460				465	
Ile	Gln	Thr	Thr	Gln	Leu	Gly	Glu	Glu	Glu	Glu	Ala	Asn	Thr	Ser
				470					475				480	
Arg	Thr	Leu	Leu	Glu	Asp	Lys	Asp	Val	Ser	Val	Val	Tyr	Ser	Glu
				485					490				495	
Val	Lys	Thr	Gln	His	Pro	Asp	Asn	Ser	Ala	Gly	Lys	Ile	Ser	Ser
				500					505				510	

Lys Asp Glu Glu Ser
515

<210> 30
<211> 453
<212> PRT
<213> Homo sapien

<400> 30

Met	Thr	Val	Ile	Arg	Phe	Phe	Pro	Ala	Ala	Ser	Ala	Thr	Lys	Arg	1	5	10	15
Val	Leu	Pro	Pro	Val	Leu	Arg	Val	Ser	Ser	Pro	Arg	Thr	Trp	Asn	20	25	30	
Pro	Asn	Val	Pro	Glu	Ser	Pro	Arg	Ile	Pro	Ala	Pro	Arg	Leu	Pro	35	40	45	
Lys	Arg	Met	Ser	Gly	Ala	Pro	Thr	Ala	Gly	Ala	Ala	Leu	Met	Leu	50	55	60	
Cys	Ala	Ala	Thr	Ala	Val	Leu	Leu	Ser	Ala	Gln	Gly	Gly	Pro	Val	65	70	75	
Gln	Ser	Lys	Ser	Pro	Arg	Phe	Ala	Ser	Trp	Asp	Glu	Met	Asn	Val	80	85	90	
Leu	Ala	His	Gly	Leu	Leu	Gln	Leu	Gly	Gln	Gly	Leu	Arg	Glu	His	95	100	105	
Ala	Glu	Arg	Thr	Arg	Ser	Gln	Leu	Ser	Ala	Leu	Glu	Arg	Arg	Leu	110	115	120	
Ser	Ala	Cys	Gly	Ser	Ala	Cys	Gln	Gly	Thr	Glu	Gly	Ser	Thr	Asp	125	130	135	
Leu	Pro	Leu	Ala	Pro	Glu	Ser	Arg	Val	Asp	Pro	Glu	Val	Leu	His	140	145	150	
Ser	Leu	Gln	Thr	Gln	Leu	Lys	Ala	Gln	Asn	Ser	Arg	Ile	Gln	Gln	155	160	165	
Leu	Phe	His	Lys	Val	Ala	Gln	Gln	Gln	Arg	His	Leu	Glu	Lys	Gln	170	175	180	
His	Leu	Arg	Ile	Gln	His	Leu	Gln	Ser	Gln	Phe	Gly	Leu	Leu	Asp	185	190	195	
His	Lys	His	Leu	Asp	His	Glu	Val	Ala	Lys	Pro	Ala	Arg	Arg	Lys	200	205	210	
Arg	Leu	Pro	Glu	Met	Ala	Gln	Pro	Val	Asp	Pro	Ala	His	Asn	Val	215	220	225	
Ser	Arg	Leu	His	Arg	Leu	Pro	Arg	Asp	Cys	Gln	Glu	Leu	Phe	Gln	230	235	240	
Val	Gly	Glu	Arg	Gln	Ser	Gly	Leu	Phe	Glu	Ile	Gln	Pro	Gln	Gly				

	245		250		255
Ser Pro Pro Phe	Leu Val Asn Cys Lys	Met Thr Ser Asp Gly	Gly		
	260	265	270		
Trp Thr Val Ile	Gln Arg Arg His Asp	Gly Ser Val Asp Phe	Asn		
	275	280	285		
Arg Pro Trp Glu	Ala Tyr Lys Ala Gly	Phe Gly Asp Pro His	Gly		
	290	295	300		
Glu Phe Trp Leu	Gly Leu Glu Lys Val	His Ser Ile Thr Gly	Asp		
	305	310	315		
Arg Asn Ser Arg	Leu Ala Val Gln Leu	Arg Asp Trp Asp Gly	Asn		
	320	325	330		
Ala Glu Leu Leu	Gln Phe Ser Val His	Leu Gly Gly Glu Asp	Thr		
	335	340	345		
Ala Tyr Ser Leu	Gln Leu Thr Ala Pro	Val Ala Gly Gln Leu	Gly		
	350	355	360		
Ala Thr Thr Val	Pro Pro Ser Gly Leu	Ser Val Pro Phe Ser	Thr		
	365	370	375		
Trp Asp Gln Asp	His Asp Leu Arg Arg	Asp Lys Asn Cys Ala	Lys		
	380	385	390		
Ser Leu Ser Gly	Gly Trp Trp Phe Gly	Thr Cys Ser His Ser	Asn		
	395	400	405		
Leu Asn Gly Gln	Tyr Phe Arg Ser Ile	Pro Gln Gln Arg Gln	Lys		
	410	415	420		
Leu Lys Lys Gly	Ile Phe Trp Lys Thr	Trp Arg Gly Arg Tyr	Tyr		
	425	430	435		
Pro Leu Gln Ala	Thr Thr Met Leu Ile	Gln Pro Met Ala Ala	Glu		
	440	445	450		

Ala Ala Ser

<210> 31
 <211> 124
 <212> .PRT
 <213> Homo sapien

<400> 31
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45

Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 32
 <211> 1752
 <212> PRT
 <213> Homo sapien

<400> 32
 Met Ala Gly Pro Arg Pro Ser Pro Trp Ala Arg Leu Leu Leu Ala
 1 5 10 15
 Ala Leu Ile Ser Val Ser Leu Ser Gly Thr Leu Ala Asn Arg Cys
 20 25 30
 Lys Lys Ala Pro Val Lys Ser Cys Thr Glu Cys Val Arg Val Asp
 35 40 45
 Lys Asp Cys Ala Tyr Cys Thr Asp Glu Met Phe Arg Asp Arg Arg
 50 55 60
 Cys Asn Thr Gln Ala Glu Leu Leu Ala Ala Gly Cys Gln Arg Glu
 65 70 75
 Ser Ile Val Val Met Glu Ser Ser Phe Gln Ile Thr Glu Glu Thr
 80 85 90
 Gln Ile Asp Thr Thr Leu Arg Arg Ser Gln Met Ser Pro Gln Gly
 95 100 105
 Leu Arg Val Arg Leu Arg Pro Gly Glu Glu Arg His Phe Glu Leu
 110 115 120
 Glu Val Phe Glu Pro Leu Glu Ser Pro Val Asp Leu Tyr Ile Leu
 125 130 135
 Met Asp Phe Ser Asn Ser Met Ser Asp Asp Leu Asp Asn Leu Lys
 140 145 150
 Lys Met Gly Gln Asn Leu Ala Arg Val Leu Ser Gln Leu Thr Ser
 155 160 165
 Asp Tyr Thr Ile Gly Phe Gly Lys Phe Val Asp Lys Val Ser Val

170					175					180				
Pro	Gln	Thr	Asp	Met	Arg	Pro	Glu	Lys	Leu	Lys	Glu	Pro	Trp	Pro
				185					190					195
Asn	Ser	Asp	Pro	Pro	Phe	Ser	Phe	Lys	Asn	Val	Ile	Ser	Leu	Thr
				200					205					210
Glu	Asp	Val	Asp	Glu	Phe	Arg	Asn	Lys	Leu	Gln	Gly	Glu	Arg	Ile
				215					220					225
Ser	Gly	Asn	Leu	Asp	Ala	Pro	Glu	Gly	Gly	Phe	Asp	Ala	Ile	Leu
				230					235					240
Gln	Thr	Ala	Val	Cys	Thr	Arg	Asp	Ile	Gly	Trp	Arg	Pro	Asp	Ser
				245					250					255
Thr	His	Leu	Leu	Val	Phe	Ser	Thr	Glu	Ser	Ala	Phe	His	Tyr	Glu
				260					265					270
Ala	Asp	Gly	Ala	Asn	Val	Leu	Ala	Gly	Ile	Met	Ser	Arg	Asn	Asp
				275					280					285
Glu	Arg	Cys	His	Leu	Asp	Thr	Thr	Gly	Thr	Tyr	Thr	Gln	Tyr	Arg
				290					295					300
Thr	Gln	Asp	Tyr	Pro	Ser	Val	Pro	Thr	Leu	Val	Arg	Leu	Leu	Ala
				305					310					315
Lys	His	Asn	Ile	Ile	Pro	Ile	Phe	Ala	Val	Thr	Asn	Tyr	Ser	Tyr
				320					325					330
Ser	Tyr	Tyr	Glu	Lys	Leu	His	Thr	Tyr	Phe	Pro	Val	Ser	Ser	Leu
				335					340					345
Gly	Val	Leu	Gln	Glu	Asp	Ser	Ser	Asn	Ile	Val	Glu	Leu	Leu	Glu
				350					355					360
Glu	Ala	Phe	Asn	Arg	Ile	Arg	Ser	Asn	Leu	Asp	Ile	Arg	Ala	Leu
				365					370					375
Asp	Ser	Pro	Arg	Gly	Leu	Arg	Thr	Glu	Val	Thr	Ser	Lys	Met	Phe
				380					385					390
Gln	Lys	Thr	Arg	Thr	Gly	Ser	Phe	His	Ile	Arg	Arg	Gly	Glu	Val
				395					400					405
Gly	Ile	Tyr	Gln	Val	Gln	Leu	Arg	Ala	Leu	Glu	His	Val	Asp	Gly
				410					415					420
Thr	His	Val	Cys	Gln	Leu	Pro	Glu	Asp	Gln	Lys	Gly	Asn	Ile	His
				425					430					435
Leu	Lys	Pro	Ser	Phe	Ser	Asp	Gly	Leu	Lys	Met	Asp	Ala	Gly	Ile
				440					445					450
Ile	Cys	Asp	Val	Cys	Thr	Cys	Glu	Leu	Gln	Lys	Glu	Val	Arg	Ser
				455					460					465

Ala	Arg	Cys	Ser	Phe	Asn	Gly	Asp	Phe	Val	Cys	Gly	Gln	Cys	Val	470	475	480
Cys	Ser	Glu	Gly	Trp	Ser	Gly	Gln	Thr	Cys	Asn	Cys	Ser	Thr	Gly	485	490	495
Ser	Leu	Ser	Asp	Ile	Gln	Pro	Cys	Leu	Arg	Glu	Gly	Glu	Asp	Lys	500	505	510
Pro	Cys	Ser	Gly	Arg	Gly	Glu	Cys	Gln	Cys	Gly	His	Cys	Val	Cys	515	520	525
Tyr	Gly	Glu	Gly	Arg	Tyr	Glu	Gly	Gln	Phe	Cys	Glu	Tyr	Asp	Asn	530	535	540
Phe	Gln	Cys	Pro	Arg	Thr	Ser	Gly	Phe	Leu	Cys	Asn	Asp	Arg	Gly	545	550	555
Arg	Cys	Ser	Met	Gly	Gln	Cys	Val	Cys	Glu	Pro	Gly	Trp	Thr	Gly	560	565	570
Pro	Ser	Cys	Asp	Cys	Pro	Leu	Ser	Asn	Ala	Thr	Cys	Ile	Asp	Ser	575	580	585
Asn	Gly	Gly	Ile	Cys	Asn	Gly	Arg	Gly	His	Cys	Glu	Cys	Gly	Arg	590	595	600
Cys	His	Cys	His	Gln	Gln	Ser	Leu	Tyr	Thr	Asp	Thr	Ile	Cys	Glu	605	610	615
Ile	Asn	Tyr	Ser	Ala	Ile	His	Pro	Gly	Leu	Cys	Glu	Asp	Leu	Arg	620	625	630
Ser	Cys	Val	Gln	Cys	Gln	Ala	Trp	Gly	Thr	Gly	Glu	Lys	Lys	Gly	635	640	645
Arg	Thr	Cys	Glu	Glu	Cys	Asn	Phe	Lys	Val	Lys	Met	Val	Asp	Glu	650	655	660
Leu	Lys	Arg	Ala	Glu	Glu	Val	Val	Val	Arg	Cys	Ser	Phe	Arg	Asp	665	670	675
Glu	Asp	Asp	Asp	Cys	Thr	Tyr	Ser	Tyr	Thr	Met	Glu	Gly	Asp	Gly	680	685	690
Ala	Pro	Gly	Pro	Asn	Ser	Thr	Val	Leu	Val	His	Lys	Lys	Lys	Asp	695	700	705
Cys	Pro	Pro	Gly	Ser	Phe	Trp	Trp	Leu	Ile	Pro	Leu	Leu	Leu	Leu	710	715	720
Leu	Leu	Pro	Leu	Leu	Ala	Leu	Leu	Leu	Leu	Leu	Cys	Trp	Lys	Tyr	725	730	735
Cys	Ala	Cys	Cys	Lys	Ala	Cys	Leu	Ala	Leu	Leu	Pro	Cys	Cys	Asn	740	745	750
Arg	Gly	His	Met	Val	Gly	Phe	Lys	Glu	Asp	His	Tyr	Met	Leu	Arg			

755					760					765				
Glu	Asn	Leu	Met	Ala	Ser	Asp	His	Leu	Asp	Thr	Pro	Met	Leu	Arg
				770					775					780
Ser	Gly	Asn	Leu	Lys	Gly	Arg	Asp	Val	Val	Arg	Trp	Lys	Val	Thr
				785					790					795
Asn	Asn	Met	Gln	Arg	Pro	Gly	Phe	Ala	Thr	His	Ala	Ala	Ser	Ile
				800					805					810
Asn	Pro	Thr	Glu	Leu	Val	Pro	Tyr	Gly	Leu	Ser	Leu	Arg	Leu	Ala
				815					820					825
Arg	Leu	Cys	Thr	Glu	Asn	Leu	Leu	Lys	Pro	Asp	Thr	Arg	Glu	Cys
				830					835					840
Ala	Gln	Leu	Arg	Gln	Glu	Val	Glu	Glu	Asn	Leu	Asn	Glu	Val	Tyr
				845					850					855
Arg	Gln	Ile	Ser	Gly	Val	His	Lys	Leu	Gln	Gln	Thr	Lys	Phe	Arg
				860					865					870
Gln	Gln	Pro	Asn	Ala	Gly	Lys	Lys	Gln	Asp	His	Thr	Ile	Val	Asp
				875					880					885
Thr	Val	Leu	Met	Ala	Pro	Arg	Ser	Ala	Lys	Pro	Ala	Leu	Leu	Lys
				890					895					900
Leu	Thr	Glu	Lys	Gln	Val	Glu	Gln	Arg	Ala	Phe	His	Asp	Leu	Lys
				905					910					915
Val	Ala	Pro	Gly	Tyr	Tyr	Thr	Leu	Thr	Ala	Asp	Gln	Asp	Ala	Arg
				920					925					930
Gly	Met	Val	Glu	Phe	Gln	Glu	Gly	Val	Glu	Leu	Val	Asp	Val	Arg
				935					940					945
Val	Pro	Leu	Phe	Ile	Arg	Pro	Glu	Asp	Asp	Asp	Glu	Lys	Gln	Leu
				950					955					960
Leu	Val	Glu	Ala	Ile	Asp	Val	Pro	Ala	Gly	Thr	Ala	Thr	Leu	Gly
				965					970					975
Arg	Arg	Leu	Val	Asn	Ile	Thr	Ile	Ile	Lys	Glu	Gln	Ala	Arg	Asp
				980					985					990
Val	Val	Ser	Phe	Glu	Gln	Pro	Glu	Phe	Ser	Val	Ser	Arg	Gly	Asp
				995					1000					1005
Gln	Val	Ala	Arg	Ile	Pro	Val	Ile	Arg	Arg	Val	Leu	Asp	Gly	Gly
				1010					1015					1020
Lys	Ser	Gln	Val	Ser	Tyr	Arg	Thr	Gln	Asp	Gly	Thr	Ala	Gln	Gly
				1025					1030					1035
Asn	Arg	Asp	Tyr	Ile	Pro	Val	Glu	Gly	Glu	Leu	Leu	Phe	Gln	Pro
				1040					1045					1050

Gly	Glu	Ala	Trp	Lys	Glu	Leu	Gln	Val	Lys	Leu	Leu	Glu	Leu	Gln	
				1055					1060					1065	
Glu	Val	Asp	Ser	Leu	Leu	Arg	Gly	Arg	Gln	Val	Arg	Arg	Phe	His	
				1070					1075					1080	
Val	Gln	Leu	Ser	Asn	Pro	Lys	Phe	Gly	Ala	His	Leu	Gly	Gln	Pro	
				1085					1090					1095	
His	Ser	Thr	Thr	Ile	Ile	Ile	Arg	Asp	Pro	Asp	Glu	Leu	Asp	Arg	
				1100					1105					1110	
Ser	Phe	Thr	Ser	Gln	Met	Leu	Ser	Ser	Gln	Pro	Pro	Pro	His	Gly	
				1115					1120					1125	
Asp	Leu	Gly	Ala	Pro	Gln	Asn	Pro	Asn	Ala	Lys	Ala	Ala	Gly	Ser	
				1130					1135					1140	
Arg	Lys	Ile	His	Phe	Asn	Trp	Leu	Pro	Pro	Ser	Gly	Lys	Pro	Met	
				1145					1150					1155	
Gly	Tyr	Arg	Val	Lys	Tyr	Trp	Ile	Gln	Gly	Asp	Ser	Glu	Ser	Glu	
				1160					1165					1170	
Ala	His	Leu	Leu	Asp	Ser	Lys	Val	Pro	Ser	Val	Glu	Leu	Thr	Asn	
				1175					1180					1185	
Leu	Tyr	Pro	Tyr	Cys	Asp	Tyr	Glu	Met	Lys	Val	Cys	Ala	Tyr	Gly	
				1190					1195					1200	
Ala	Gln	Gly	Glu	Gly	Pro	Tyr	Ser	Ser	Leu	Val	Ser	Cys	Arg	Thr	
				1205					1210					1215	
His	Gln	Glu	Val	Pro	Ser	Glu	Pro	Gly	Arg	Leu	Ala	Phe	Asn	Val	
				1220					1225					1230	
Val	Ser	Ser	Thr	Val	Thr	Gln	Leu	Ser	Trp	Ala	Glu	Pro	Ala	Glu	
				1235					1240					1245	
Thr	Asn	Gly	Glu	Ile	Thr	Ala	Tyr	Glu	Val	Cys	Tyr	Gly	Leu	Val	
				1250					1255					1260	
Asn	Asp	Asp	Asn	Arg	Pro	Ile	Gly	Pro	Met	Lys	Lys	Val	Leu	Val	
				1265					1270					1275	
Asp	Asn	Pro	Lys	Asn	Arg	Met	Leu	Leu	Ile	Glu	Asn	Leu	Arg	Glu	
				1280					1285					1290	
Ser	Gln	Pro	Tyr	Arg	Tyr	Thr	Val	Lys	Ala	Arg	Asn	Gly	Ala	Gly	
				1295					1300					1305	
Trp	Gly	Pro	Glu	Arg	Glu	Ala	Ile	Ile	Asn	Leu	Ala	Thr	Gln	Pro	
				1310					1315					1320	
Lys	Arg	Pro	Met	Ser	Ile	Pro	Ile	Ile	Pro	Asp	Ile	Pro	Ile	Val	
				1325					1330					1335	
Asp	Ala	Gln	Ser	Gly	Glu	Asp	Tyr	Asp	Ser	Phe	Leu	Met	Tyr	Ser	

1340	1345	1350
Asp Asp Val Leu Arg Ser Pro Ser Gly Ser Gln Arg Pro Ser Val		
1355	1360	1365
Ser Asp Asp Thr Glu His Leu Val Asn Gly Arg Met Asp Phe Ala		
1370	1375	1380
Phe Pro Gly Ser Thr Asn Ser Leu His Arg Met Thr Thr Thr Ser		
1385	1390	1395
Ala Ala Ala Tyr Gly Thr His Leu Ser Pro His Val Pro His Arg		
1400	1405	1410
Val Leu Ser Thr Ser Ser Thr Leu Thr Arg Asp Tyr Asn Ser Leu		
1415	1420	1425
Thr Arg Ser Glu His Ser His Ser Thr Thr Leu Pro Arg Asp Tyr		
1430	1435	1440
Ser Thr Leu Thr Ser Val Ser Ser His Asp Ser Arg Leu Thr Ala		
1445	1450	1455
Gly Val Pro Asp Thr Pro Thr Arg Leu Val Phe Ser Ala Leu Gly		
1460	1465	1470
Pro Thr Ser Leu Arg Val Ser Trp Gln Glu Pro Arg Cys Glu Arg		
1475	1480	1485
Pro Leu Gln Gly Tyr Ser Val Glu Tyr Gln Leu Leu Asn Gly Gly		
1490	1495	1500
Glu Leu His Arg Leu Asn Ile Pro Asn Pro Ala Gln Thr Ser Val		
1505	1510	1515
Val Val Glu Asp Leu Leu Pro Asn His Ser Tyr Val Phe Arg Val		
1520	1525	1530
Arg Ala Gln Ser Gln Glu Gly Trp Gly Arg Glu Arg Glu Gly Val		
1535	1540	1545
Ile Thr Ile Glu Ser Gln Val His Pro Gln Ser Pro Leu Cys Pro		
1550	1555	1560
Leu Pro Gly Ser Ala Phe Thr Leu Ser Thr Pro Ser Ala Pro Gly		
1565	1570	1575
Pro Leu Val Phe Thr Ala Leu Ser Pro Asp Ser Leu Gln Leu Ser		
1580	1585	1590
Trp Glu Arg Pro Arg Arg Pro Asn Gly Asp Ile Val Gly Tyr Leu		
1595	1600	1605
Val Thr Cys Glu Met Ala Gln Gly Gly Gly Pro Ala Thr Ala Phe		
1610	1615	1620
Arg Val Asp Gly Asp Ser Pro Glu Ser Arg Leu Thr Val Pro Gly		
1625	1630	1635

Leu Ser Glu Asn Val Pro Tyr Lys Phe Lys Val Gln Ala Arg Thr
1640 1645 1650

Thr Glu Gly Phe Gly Pro Glu Arg Glu Gly Ile Ile Thr Ile Glu
1655 1660 1665

Ser Gln Asp Gly Gly Pro Phe Pro Gln Leu Gly Ser Arg Ala Gly
1670 1675 1680

Leu Phe Gln His Pro Leu Gln Ser Glu Tyr Ser Ser Ile Thr Thr
1685 1690 1695

Thr His Thr Ser Ala Thr Glu Pro Phe Leu Val Asp Gly Pro Thr
1700 1705 1710

Leu Gly Ala Gln His Leu Glu Ala Gly Gly Ser Leu Thr Arg His
1715 1720 1725

Val Thr Gln Glu Phe Val Ser Arg Thr Leu Thr Thr Ser Gly Thr
1730 1735 1740

Leu Ser Thr His Met Asp Gln Gln Phe Phe Gln Thr
1745 1750

<210> 33

<211> 1336

<212> PRT

<213> Homo sapien

<400> 33

Met Thr Leu Asp Arg Pro Gly Glu Gly Ala Thr Met Leu Lys Thr
1 5 10 15

Phe Thr Val Leu Leu Phe Cys Ile Arg Met Ser Leu Gly Met Thr
20 25 30

Ser Ile Val Met Asp Pro Gln Pro Glu Leu Trp Ile Glu Ser Asn
35 40 45

Tyr Pro Gln Ala Pro Trp Glu Asn Ile Thr Leu Trp Cys Arg Ser
50 55 60

Pro Ser Arg Ile Ser Ser Lys Phe Leu Leu Leu Lys Asp Lys Thr
65 70 75

Gln Met Thr Trp Ile Arg Pro Ser His Lys Thr Phe Gln Val Ser
80 85 90

Phe Leu Ile Gly Ala Leu Thr Glu Ser Asn Ala Gly Leu Tyr Arg
95 100 105

Cys Cys Tyr Trp Lys Glu Thr Gly Trp Ser Lys Pro Ser Lys Val
110 115 120

Leu Glu Leu Glu Ala Pro Gly Gln Leu Pro Lys Pro Ile Phe Trp
125 130 135

Ile Gln Ala Glu Thr Pro Ala Leu Pro Gly Cys Asn Val Asn Ile

140	145	150
Leu Cys His Gly Trp	Leu Gln Asp Leu Val Phe Met Leu Phe Lys	
155	160	165
Glu Gly Tyr Ala Glu	Pro Val Asp Tyr Gln Val Pro Thr Gly Thr	
170	175	180
Met Ala Ile Phe Ser	Ile Asp Asn Leu Thr Pro Glu Asp Glu Gly	
185	190	195
Val Tyr Ile Cys Arg	Thr His Ile Gln Met Leu Pro Thr Leu Trp	
200	205	210
Ser Glu Pro Ser Asn	Pro Leu Lys Leu Val Val Ala Gly Leu Tyr	
215	220	225
Pro Lys Pro Thr Leu	Thr Ala His Pro Gly Pro Ile Met Ala Pro	
230	235	240
Gly Glu Ser Leu Asn	Leu Arg Cys Gln Gly Pro Ile Tyr Gly Met	
245	250	255
Thr Phe Ala Leu Met	Arg Val Glu Asp Leu Glu Lys Ser Phe Tyr	
260	265	270
His Lys Lys Thr Ile	Lys Asn Glu Ala Asn Phe Phe Phe Gln Ser	
275	280	285
Leu Lys Ile Gln Asp	Thr Gly His Tyr Leu Cys Phe Tyr Tyr Asp	
290	295	300
Ala Ser Tyr Arg Gly	Ser Leu Leu Ser Asp Val Leu Lys Ile Trp	
305	310	315
Val Thr Asp Thr Phe	Pro Lys Thr Trp Leu Leu Ala Arg Pro Ser	
320	325	330
Ala Val Val Gln Met	Gly Gln Asn Val Ser Leu Arg Cys Arg Gly	
335	340	345
Pro Val Asp Gly Val	Gly Leu Ala Leu Tyr Lys Lys Gly Glu Asp	
350	355	360
Lys Pro Leu Gln Phe	Leu Asp Ala Thr Ser Ile Asp Asp Asn Thr	
365	370	375
Ser Phe Phe Leu Asn	Asn Val Thr Tyr Ser Asp Thr Gly Ile Tyr	
380	385	390
Ser Cys His Tyr Leu	Leu Thr Trp Lys Thr Ser Ile Arg Met Pro	
395	400	405
Ser His Asn Thr Val	Glu Leu Met Val Val Asp Lys Pro Pro Lys	
410	415	420
Pro Ser Leu Ser Ala	Trp Pro Ser Thr Val Phe Lys Leu Gly Lys	
425	430	435

Ala	Ile	Thr	Leu	Gln	Cys	Arg	Val	Ser	His	Pro	Val	Leu	Glu	Phe	440	445	450
Ser	Leu	Glu	Trp	Glu	Glu	Arg	Glu	Thr	Phe	Gln	Arg	Phe	Ser	Val	455	460	465
Asn	Gly	Asp	Phe	Ile	Ile	Ser	Asn	Val	Asp	Gly	Lys	Gly	Thr	Gly	470	475	480
Thr	Tyr	Ser	Cys	Ser	Tyr	Arg	Val	Glu	Thr	His	Pro	Asn	Met	Trp	485	490	495
Ser	His	Arg	Ser	Glu	Pro	Leu	Lys	Leu	Met	Gly	Pro	Ala	Gly	Tyr	500	505	510
Leu	Thr	Trp	Asn	Tyr	Val	Leu	Asn	Glu	Ala	Ile	Arg	Leu	Ser	Leu	515	520	525
Ile	Met	Gln	Leu	Val	Ala	Leu	Leu	Leu	Val	Val	Leu	Trp	Ile	Arg	530	535	540
Trp	Lys	Cys	Arg	Arg	Leu	Arg	Ile	Arg	Glu	Ala	Trp	Leu	Leu	Gly	545	550	555
Thr	Ala	Gln	Gly	Val	Thr	Met	Leu	Phe	Ile	Val	Thr	Ala	Leu	Leu	560	565	570
Cys	Cys	Gly	Leu	Cys	Asn	Gly	Val	Leu	Ile	Glu	Glu	Thr	Glu	Ile	575	580	585
Val	Met	Pro	Thr	Pro	Lys	Pro	Glu	Leu	Trp	Ala	Glu	Thr	Asn	Phe	590	595	600
Pro	Leu	Ala	Pro	Trp	Lys	Asn	Leu	Thr	Leu	Trp	Cys	Arg	Ser	Pro	605	610	615
Ser	Gly	Ser	Thr	Lys	Glu	Phe	Val	Leu	Leu	Lys	Asp	Gly	Thr	Gly	620	625	630
Trp	Ile	Ala	Thr	Arg	Pro	Ala	Ser	Glu	Gln	Val	Arg	Ala	Ala	Phe	635	640	645
Pro	Leu	Gly	Ala	Leu	Thr	Gln	Ser	His	Thr	Gly	Ser	Tyr	His	Cys	650	655	660
His	Ser	Trp	Glu	Glu	Met	Ala	Val	Ser	Glu	Pro	Ser	Glu	Ala	Leu	665	670	675
Glu	Leu	Val	Gly	Thr	Asp	Ile	Leu	Pro	Lys	Pro	Val	Ile	Ser	Ala	680	685	690
Ser	Pro	Thr	Ile	Arg	Gly	Gln	Glu	Leu	Gln	Leu	Arg	Cys	Lys	Gly	695	700	705
Trp	Leu	Ala	Gly	Met	Gly	Phe	Ala	Leu	Tyr	Lys	Glu	Gly	Glu	Gln	710	715	720
Glu	Pro	Val	Gln	Gln	Leu	Gly	Ala	Val	Gly	Arg	Glu	Ala	Phe	Phe			

725										730					735				
Thr	Ile	Gln	Arg	Met	Glu	Asp	Lys	Asp	Glu	Gly	Asn	Tyr	Ser	Cys					
				740					745					750					
Arg	Thr	His	Thr	Glu	Lys	Leu	Pro	Phe	Lys	Trp	Ser	Glu	Pro	Ser					
				755					760					765					
Glu	Pro	Leu	Glu	Leu	Val	Ile	Lys	Glu	Met	Tyr	Pro	Lys	Pro	Phe					
				770					775					780					
Phe	Lys	Thr	Trp	Ala	Ser	Pro	Val	Val	Thr	Pro	Gly	Ala	Arg	Val					
				785					790					795					
Thr	Phe	Asn	Cys	Ser	Thr	Pro	His	Gln	His	Met	Ser	Phe	Ile	Leu					
				800					805					810					
Tyr	Lys	Asp	Gly	Ser	Glu	Ile	Ala	Ser	Ser	Asp	Arg	Ser	Trp	Ala					
				815					820					825					
Ser	Pro	Gly	Ala	Ser	Ala	Ala	His	Phe	Leu	Ile	Ile	Ser	Val	Gly					
				830					835					840					
Ile	Gly	Asp	Gly	Gly	Asn	Tyr	Ser	Cys	Arg	Tyr	Tyr	Asp	Phe	Ser					
				845					850					855					
Ile	Trp	Ser	Glu	Pro	Ser	Asp	Pro	Val	Glu	Leu	Val	Val	Thr	Glu					
				860					865					870					
Phe	Tyr	Pro	Lys	Pro	Thr	Leu	Leu	Ala	Gln	Pro	Gly	Pro	Val	Val					
				875					880					885					
Phe	Pro	Gly	Lys	Ser	Val	Ile	Leu	Arg	Cys	Gln	Gly	Thr	Phe	Gln					
				890					895					900					
Gly	Met	Arg	Phe	Ala	Leu	Leu	Gln	Glu	Gly	Ala	His	Val	Pro	Leu					
				905					910					915					
Gln	Phe	Arg	Ser	Val	Ser	Gly	Asn	Ser	Ala	Asp	Phe	Leu	Leu	His					
				920					925					930					
Thr	Val	Gly	Ala	Glu	Asp	Ser	Gly	Asn	Tyr	Ser	Cys	Ile	Tyr	Tyr					
				935					940					945					
Glu	Thr	Thr	Met	Ser	Asn	Arg	Gly	Ser	Tyr	Leu	Ser	Met	Pro	Leu					
				950					955					960					
Met	Ile	Trp	Val	Thr	Asp	Thr	Phe	Pro	Lys	Pro	Trp	Leu	Phe	Ala					
				965					970					975					
Glu	Pro	Ser	Ser	Val	Val	Pro	Met	Gly	Gln	Asn	Val	Thr	Leu	Trp					
				980					985					990					
Cys	Arg	Gly	Pro	Val	His	Gly	Val	Gly	Tyr	Ile	Leu	His	Lys	Glu					
				995					1000					1005					
Gly	Glu	Ala	Thr	Ser	Met	Gln	Leu	Trp	Gly	Ser	Thr	Ser	Asn	Asp					
				1010					1015					1020					

1310	1315	1320
Pro Ser Ser Thr Ser Gln Arg Ile Ser Val Glu Leu Pro Val Pro		
1325	1330	1335

Ile

<210> 34
 <211> 1907
 <212> PRT
 <213> Homo sapien

<400> 34

Met	Ala	Pro	Glu	Pro	Ala	Pro	Gly	Arg	Thr	Met	Val	Pro	Leu	Val
1				5					10					15
Pro	Ala	Leu	Val	Met	Leu	Gly	Leu	Val	Ala	Gly	Ala	His	Gly	Asp
				20					25					30
Ser	Lys	Pro	Val	Phe	Ile	Lys	Val	Pro	Glu	Asp	Gln	Thr	Gly	Leu
				35					40					45
Ser	Gly	Gly	Val	Ala	Ser	Phe	Val	Cys	Gln	Ala	Thr	Gly	Glu	Pro
				50					55					60
Lys	Pro	Arg	Ile	Thr	Trp	Met	Lys	Lys	Gly	Lys	Lys	Val	Ser	Ser
				65					70					75
Gln	Arg	Phe	Glu	Val	Ile	Glu	Phe	Asp	Asp	Gly	Ala	Gly	Ser	Val
				80					85					90
Leu	Arg	Ile	Gln	Pro	Leu	Arg	Val	Gln	Arg	Asp	Glu	Ala	Ile	Tyr
				95					100					105
Glu	Cys	Thr	Ala	Thr	Asn	Ser	Leu	Gly	Glu	Ile	Asn	Thr	Ser	Ala
				110					115					120
Lys	Leu	Ser	Val	Leu	Glu	Glu	Glu	Gln	Leu	Pro	Pro	Gly	Phe	Pro
				125					130					135
Ser	Ile	Asp	Met	Gly	Pro	Gln	Leu	Lys	Val	Val	Glu	Lys	Ala	Arg
				140					145					150
Thr	Ala	Thr	Met	Leu	Cys	Ala	Ala	Gly	Gly	Asn	Pro	Asp	Pro	Glu
				155					160					165
Ile	Ser	Trp	Phe	Lys	Asp	Phe	Leu	Pro	Val	Asp	Pro	Ala	Thr	Ser
				170					175					180
Asn	Gly	Arg	Ile	Lys	Gln	Leu	Arg	Ser	Gly	Ala	Leu	Gln	Ile	Glu
				185					190					195
Ser	Ser	Glu	Glu	Ser	Asp	Gln	Gly	Lys	Tyr	Glu	Cys	Val	Ala	Thr
				200					205					210
Asn	Ser	Ala	Gly	Thr	Arg	Tyr	Ser	Ala	Pro	Ala	Asn	Leu	Tyr	Val
				215					220					225

Arg	Val	Arg	Arg	Val	Ala	Pro	Arg	Phe	Ser	Ile	Pro	Pro	Ser	Ser	
				230					235					240	
Gln	Glu	Val	Met	Pro	Gly	Gly	Ser	Val	Asn	Leu	Thr	Cys	Val	Ala	
				245					250					255	
Val	Gly	Ala	Pro	Met	Pro	Tyr	Val	Lys	Trp	Met	Met	Gly	Ala	Glu	
				260					265					270	
Glu	Leu	Thr	Lys	Glu	Asp	Glu	Met	Pro	Val	Gly	Arg	Asn	Val	Leu	
				275					280					285	
Glu	Leu	Ser	Asn	Val	Val	Arg	Ser	Ala	Asn	Tyr	Thr	Cys	Val	Ala	
				290					295					300	
Ile	Ser	Ser	Leu	Gly	Met	Ile	Glu	Ala	Thr	Ala	Gln	Val	Thr	Val	
				305					310					315	
Lys	Ala	Leu	Pro	Lys	Pro	Pro	Ile	Asp	Leu	Val	Val	Thr	Glu	Thr	
				320					325					330	
Thr	Ala	Thr	Ser	Val	Thr	Leu	Thr	Trp	Asp	Ser	Gly	Asn	Ser	Glu	
				335					340					345	
Pro	Val	Thr	Tyr	Tyr	Gly	Ile	Gln	Tyr	Arg	Ala	Ala	Gly	Thr	Glu	
				350					355					360	
Gly	Pro	Phe	Gln	Glu	Val	Asp	Gly	Val	Ala	Thr	Thr	Arg	Tyr	Ser	
				365					370					375	
Ile	Gly	Gly	Leu	Ser	Pro	Phe	Ser	Glu	Tyr	Ala	Phe	Arg	Val	Leu	
				380					385					390	
Ala	Val	Asn	Ser	Ile	Gly	Arg	Gly	Pro	Pro	Ser	Glu	Ala	Val	Arg	
				395					400					405	
Ala	Arg	Thr	Gly	Glu	Gln	Ala	Pro	Ser	Ser	Pro	Pro	Arg	Arg	Val	
				410					415					420	
Gln	Ala	Arg	Met	Leu	Ser	Ala	Ser	Thr	Met	Leu	Val	Gln	Trp	Glu	
				425					430					435	
Pro	Pro	Glu	Glu	Pro	Asn	Gly	Leu	Val	Arg	Gly	Tyr	Arg	Val	Tyr	
				440					445					450	
Tyr	Thr	Pro	Asp	Ser	Arg	Arg	Pro	Pro	Asn	Ala	Trp	His	Lys	His	
				455					460					465	
Asn	Thr	Asp	Ala	Gly	Leu	Leu	Thr	Thr	Val	Gly	Ser	Leu	Leu	Pro	
				470					475					480	
Gly	Ile	Thr	Tyr	Ser	Leu	Arg	Val	Leu	Ala	Phe	Thr	Ala	Val	Gly	
				485					490					495	
Asp	Gly	Pro	Pro	Ser	Pro	Thr	Ile	Gln	Val	Lys	Thr	Gln	Gln	Gly	
				500					505					510	
Val	Pro	Ala	Gln	Pro	Ala	Asp	Phe	Gln	Ala	Glu	Val	Glu	Ser	Asp	

515					520					525				
Thr	Arg	Ile	Gln	Leu	Ser	Trp	Leu	Leu	Pro	Pro	Gln	Glu	Arg	Ile
				530					535					540
Ile	Met	Tyr	Glu	Leu	Val	Tyr	Trp	Ala	Ala	Glu	Asp	Glu	Asp	Gln
				545					550					555
Gln	His	Lys	Val	Thr	Phe	Asp	Pro	Thr	Ser	Ser	Tyr	Thr	Leu	Glu
				560					565					570
Asp	Leu	Lys	Pro	Asp	Thr	Leu	Tyr	Arg	Phe	Gln	Leu	Ala	Ala	Arg
				575					580					585
Ser	Asp	Met	Gly	Val	Gly	Val	Phe	Thr	Pro	Thr	Ile	Glu	Ala	Arg
				590					595					600
Thr	Ala	Gln	Ser	Thr	Pro	Ser	Ala	Pro	Pro	Gln	Lys	Val	Met	Cys
				605					610					615
Val	Ser	Met	Gly	Ser	Thr	Thr	Val	Arg	Val	Ser	Trp	Val	Pro	Pro
				620					625					630
Pro	Ala	Asp	Ser	Arg	Asn	Gly	Val	Ile	Thr	Gln	Tyr	Ser	Val	Ala
				635					640					645
His	Glu	Ala	Val	Asp	Gly	Glu	Asp	Arg	Gly	Arg	His	Val	Val	Asp
				650					655					660
Gly	Ile	Ser	Arg	Glu	His	Ser	Ser	Trp	Asp	Leu	Val	Gly	Leu	Glu
				665					670					675
Lys	Trp	Thr	Glu	Tyr	Arg	Val	Trp	Val	Arg	Ala	His	Thr	Asp	Val
				680					685					690
Gly	Pro	Gly	Pro	Glu	Ser	Ser	Pro	Val	Leu	Val	Arg	Thr	Asp	Glu
				695					700					705
Asp	Val	Pro	Ser	Gly	Pro	Pro	Arg	Lys	Val	Glu	Val	Glu	Pro	Leu
				710					715					720
Asn	Ser	Thr	Ala	Val	His	Val	Tyr	Trp	Lys	Leu	Pro	Val	Pro	Ser
				725					730					735
Lys	Gln	His	Gly	Gln	Ile	Arg	Gly	Tyr	Gln	Val	Thr	Tyr	Val	Arg
				740					745					750
Leu	Glu	Asn	Gly	Glu	Pro	Arg	Gly	Leu	Pro	Ile	Ile	Gln	Asp	Val
				755					760					765
Met	Leu	Ala	Glu	Ala	Gln	Trp	Arg	Pro	Glu	Glu	Ser	Glu	Asp	Tyr
				770					775					780
Glu	Thr	Thr	Ile	Ser	Gly	Leu	Thr	Pro	Glu	Thr	Thr	Tyr	Ser	Val
				785					790					795
Thr	Val	Ala	Ala	Tyr	Thr	Thr	Lys	Gly	Asp	Gly	Ala	Arg	Ser	Lys
				800					805					810

Pro	Lys	Ile	Val	Thr	Thr	Thr	Gly	Ala	Val	Pro	Gly	Arg	Pro	Thr	815	820	825
Met	Met	Ile	Ser	Thr	Thr	Ala	Met	Asn	Thr	Ala	Leu	Leu	Gln	Trp	830	835	840
His	Pro	Pro	Lys	Glu	Leu	Pro	Gly	Glu	Leu	Leu	Gly	Tyr	Arg	Leu	845	850	855
Gln	Tyr	Cys	Arg	Ala	Asp	Glu	Ala	Arg	Pro	Asn	Thr	Ile	Asp	Phe	860	865	870
Gly	Lys	Asp	Asp	Gln	His	Phe	Thr	Val	Thr	Gly	Leu	His	Lys	Gly	875	880	885
Thr	Thr	Tyr	Ile	Phe	Arg	Leu	Ala	Ala	Lys	Asn	Arg	Ala	Gly	Leu	890	895	900
Gly	Glu	Glu	Phe	Glu	Lys	Glu	Ile	Arg	Thr	Pro	Glu	Asp	Leu	Pro	905	910	915
Ser	Gly	Phe	Pro	Gln	Asn	Leu	His	Val	Thr	Gly	Leu	Thr	Thr	Ser	920	925	930
Thr	Thr	Glu	Leu	Ala	Trp	Asp	Pro	Pro	Val	Leu	Ala	Glu	Arg	Asn	935	940	945
Gly	Arg	Ile	Ile	Ser	Tyr	Thr	Val	Val	Phe	Arg	Asp	Ile	Asn	Ser	950	955	960
Gln	Gln	Glu	Leu	Gln	Asn	Ile	Thr	Thr	Asp	Thr	Arg	Phe	Thr	Leu	965	970	975
Thr	Gly	Leu	Lys	Pro	Asp	Thr	Thr	Tyr	Asp	Ile	Lys	Val	Arg	Ala	980	985	990
Trp	Thr	Ser	Lys	Gly	Ser	Gly	Pro	Leu	Ser	Pro	Ser	Ile	Gln	Ser	995	1000	1005
Arg	Thr	Met	Pro	Val	Glu	Gln	Val	Phe	Ala	Lys	Asn	Phe	Arg	Val	1010	1015	1020
Ala	Ala	Ala	Met	Lys	Thr	Ser	Val	Leu	Leu	Ser	Trp	Glu	Val	Pro	1025	1030	1035
Asp	Ser	Tyr	Lys	Ser	Ala	Val	Pro	Phe	Lys	Ile	Leu	Tyr	Asn	Gly	1040	1045	1050
Gln	Ser	Val	Glu	Val	Asp	Gly	His	Ser	Met	Arg	Lys	Leu	Ile	Ala	1055	1060	1065
Asp	Leu	Gln	Pro	Asn	Thr	Glu	Tyr	Ser	Phe	Val	Leu	Met	Asn	Arg	1070	1075	1080
Gly	Ser	Ser	Ala	Gly	Gly	Leu	Gln	His	Leu	Val	Ser	Ile	Arg	Thr	1085	1090	1095
Ala	Pro	Asp	Leu	Leu	Pro	His	Lys	Pro	Leu	Pro	Ala	Ser	Ala	Tyr			

1100	1105	1110
Ile Glu Asp Gly Arg Phe Asp Leu Ser Met Pro His Val Gln Asp		
1115	1120	1125
Pro Ser Leu Val Arg Trp Phe Tyr Ile Val Val Val Pro Ile Asp		
1130	1135	1140
Arg Val Gly Gly Ser Met Leu Thr Pro Arg Trp Ser Thr Pro Glu		
1145	1150	1155
Glu Leu Glu Leu Asp Glu Leu Leu Glu Ala Ile Glu Gln Gly Gly		
1160	1165	1170
Glu Glu Gln Arg Arg Arg Arg Arg Gln Ala Glu Arg Leu Lys Pro		
1175	1180	1185
Tyr Val Ala Ala Gln Leu Asp Val Leu Pro Glu Thr Phe Thr Leu		
1190	1195	1200
Gly Asp Lys Lys Asn Tyr Arg Gly Phe Tyr Asn Arg Pro Leu Ser		
1205	1210	1215
Pro Asp Leu Ser Tyr Gln Cys Phe Val Leu Ala Ser Leu Lys Glu		
1220	1225	1230
Pro Met Asp Gln Lys Arg Tyr Ala Ser Ser Pro Tyr Ser Asp Glu		
1235	1240	1245
Ile Val Val Gln Val Thr Pro Ala Gln Gln Gln Glu Glu Pro Glu		
1250	1255	1260
Met Leu Trp Val Thr Gly Pro Val Leu Ala Val Ile Leu Ile Ile		
1265	1270	1275
Leu Ile Val Ile Ala Ile Leu Leu Phe Lys Arg Lys Arg Thr His		
1280	1285	1290
Ser Pro Ser Ser Lys Asp Glu Gln Ser Ile Gly Leu Lys Asp Ser		
1295	1300	1305
Leu Leu Ala His Ser Ser Asp Pro Val Glu Met Arg Arg Leu Asn		
1310	1315	1320
Tyr Gln Thr Pro Gly Met Arg Asp His Pro Pro Ile Pro Ile Thr		
1325	1330	1335
Asp Leu Ala Asp Asn Ile Glu Arg Leu Lys Ala Asn Asp Gly Leu		
1340	1345	1350
Lys Phe Ser Gln Glu Tyr Glu Ser Ile Asp Pro Gly Gln Gln Phe		
1355	1360	1365
Thr Trp Glu Asn Ser Asn Leu Glu Val Asn Lys Pro Lys Asn Arg		
1370	1375	1380
Tyr Ala Asn Val Ile Ala Tyr Asp His Ser Arg Val Ile Leu Thr		
1385	1390	1395

Ser Ile Asp Gly Val	Pro Gly Ser Asp Tyr	Ile Asn Ala Asn Tyr
1400	1405	1410
Ile Asp Gly Tyr Arg	Lys Gln Asn Ala Tyr	Ile Ala Thr Gln Gly
1415	1420	1425
Pro Leu Pro Glu Thr	Met Gly Asp Phe Trp	Arg Met Val Trp Glu
1430	1435	1440
Gln Arg Thr Ala Thr	Val Val Met Met Thr	Arg Leu Glu Glu Lys
1445	1450	1455
Ser Arg Val Lys Cys	Asp Gln Tyr Trp Pro	Ala Arg Gly Thr Glu
1460	1465	1470
Thr Cys Gly Leu Ile	Gln Val Thr Leu Leu	Asp Thr Val Glu Leu
1475	1480	1485
Ala Thr Tyr Thr Val	Arg Thr Phe Ala Leu	His Lys Ser Gly Ser
1490	1495	1500
Ser Glu Lys Arg Glu	Leu Arg Gln Phe Gln	Phe Met Ala Trp Pro
1505	1510	1515
Asp His Gly Val Pro	Glu Tyr Pro Thr Pro	Ile Leu Ala Phe Leu
1520	1525	1530
Arg Arg Val Lys Ala	Cys Asn Pro Leu Asp	Ala Gly Pro Met Val
1535	1540	1545
Val His Cys Ser Ala	Gly Val Gly Arg Thr	Gly Cys Phe Ile Val
1550	1555	1560
Ile Asp Ala Met Leu	Glu Arg Met Lys His	Glu Lys Thr Val Asp
1565	1570	1575
Ile Tyr Gly His Val	Thr Cys Met Arg Ser	Gln Arg Asn Tyr Met
1580	1585	1590
Val Gln Thr Glu Asp	Gln Tyr Val Phe Ile	His Glu Ala Leu Leu
1595	1600	1605
Glu Ala Ala Thr Cys	Gly His Thr Glu Val	Pro Ala Arg Asn Leu
1610	1615	1620
Tyr Ala His Ile Gln	Lys Leu Gly Gln Val	Pro Pro Gly Glu Ser
1625	1630	1635
Val Thr Ala Met Glu	Leu Glu Phe Lys Leu	Leu Ala Ser Ser Lys
1640	1645	1650
Ala His Thr Ser Arg	Phe Ile Ser Ala Asn	Leu Pro Cys Asn Lys
1655	1660	1665
Phe Lys Asn Arg Leu	Val Asn Ile Met Pro	Tyr Glu Leu Thr Arg
1670	1675	1680
Val Cys Leu Gln Pro	Ile Arg Gly Val Glu	Gly Ser Asp Tyr Ile

Pro	Glu	Asp	Gln	Asp	Gly	Ser	Gly	Asp	Asp	Ser	Asp	Asn	Phe	Ser		35	40	45
Gly	Ser	Gly	Ala	Gly	Ala	Leu	Gln	Asp	Ile	Thr	Leu	Ser	Gln	Gln		50	55	60
Thr	Pro	Ser	Thr	Trp	Lys	Asp	Thr	Gln	Leu	Leu	Thr	Ala	Ile	Pro		65	70	75
Thr	Ser	Pro	Glu	Pro	Thr	Gly	Leu	Glu	Ala	Thr	Ala	Ala	Ser	Thr		80	85	90
Ser	Thr	Leu	Pro	Ala	Gly	Glu	Gly	Pro	Lys	Glu	Gly	Glu	Ala	Val		95	100	105
Val	Leu	Pro	Glu	Val	Glu	Pro	Gly	Leu	Thr	Ala	Arg	Glu	Gln	Glu		110	115	120
Ala	Thr	Pro	Arg	Pro	Arg	Glu	Thr	Thr	Gln	Leu	Pro	Thr	Thr	His		125	130	135
Gln	Ala	Ser	Thr	Thr	Thr	Ala	Thr	Thr	Ala	Gln	Glu	Pro	Ala	Thr		140	145	150
Ser	His	Pro	His	Arg	Asp	Met	Gln	Pro	Gly	His	His	Glu	Thr	Ser		155	160	165
Thr	Pro	Ala	Gly	Pro	Ser	Gln	Ala	Asp	Leu	His	Thr	Pro	His	Thr		170	175	180
Glu	Asp	Gly	Gly	Pro	Ser	Ala	Thr	Glu	Arg	Ala	Ala	Glu	Asp	Gly		185	190	195
Ala	Ser	Ser	Gln	Leu	Pro	Ala	Ala	Glu	Gly	Ser	Gly	Glu	Gln	Asp		200	205	210
Phe	Thr	Phe	Glu	Thr	Ser	Gly	Glu	Asn	Thr	Ala	Val	Val	Ala	Val		215	220	225
Glu	Pro	Asp	Arg	Arg	Asn	Gln	Ser	Pro	Val	Asp	Gln	Gly	Ala	Thr		230	235	240
Gly	Ala	Ser	Gln	Gly	Leu	Leu	Asp	Arg	Lys	Glu	Val	Leu	Gly	Gly		245	250	255
Val	Ile	Ala	Gly	Gly	Leu	Val	Gly	Leu	Ile	Phe	Ala	Val	Cys	Leu		260	265	270
Val	Gly	Phe	Met	Leu	Tyr	Arg	Met	Lys	Lys	Lys	Asp	Glu	Gly	Ser		275	280	285
Tyr	Ser	Leu	Glu	Glu	Pro	Lys	Gln	Ala	Asn	Gly	Gly	Ala	Tyr	Gln		290	295	300
Lys	Pro	Thr	Lys	Gln	Glu	Glu	Phe	Tyr	Ala							305	310	

<210> 36

<211> 131
 <212> PRT
 <213> Homo sapien

<400> 36

Met	Lys	Ile	Phe	Leu	Pro	Val	Leu	Leu	Ala	Ala	Leu	Leu	Gly	Val	1	5	10	15
Glu	Arg	Ala	Ser	Ser	Leu	Met	Cys	Phe	Ser	Cys	Leu	Asn	Gln	Lys	20	25	30	
Ser	Asn	Leu	Tyr	Cys	Leu	Lys	Pro	Thr	Ile	Cys	Ser	Asp	Gln	Asp	35	40	45	
Asn	Tyr	Cys	Val	Thr	Val	Ser	Ala	Ser	Ala	Gly	Ile	Gly	Asn	Leu	50	55	60	
Val	Thr	Phe	Gly	His	Ser	Leu	Ser	Lys	Thr	Cys	Ser	Pro	Ala	Cys	65	70	75	
Pro	Ile	Pro	Glu	Gly	Val	Asn	Val	Gly	Val	Ala	Ser	Met	Gly	Ile	80	85	90	
Ser	Cys	Cys	Gln	Ser	Phe	Leu	Cys	Asn	Phe	Ser	Ala	Ala	Asp	Gly	95	100	105	
Gly	Leu	Arg	Ala	Ser	Val	Thr	Leu	Leu	Gly	Ala	Gly	Leu	Leu	Leu	110	115	120	
Ser	Leu	Leu	Pro	Ala	Leu	Leu	Arg	Phe	Gly	Pro	125	130						

<210> 37
 <211> 249
 <212> PRT
 <213> Homo sapien

<400> 37

Met	Asp	Gly	Lys	Lys	Cys	Ser	Val	Trp	Met	Phe	Leu	Pro	Leu	Val	1	5	10	15
Phe	Thr	Leu	Phe	Thr	Ser	Ala	Gly	Leu	Trp	Ile	Val	Tyr	Phe	Ile	20	25	30	
Ala	Val	Glu	Asp	Asp	Lys	Ile	Leu	Pro	Leu	Asn	Ser	Ala	Glu	Arg	35	40	45	
Lys	Pro	Gly	Val	Lys	His	Ala	Pro	Tyr	Ile	Ser	Ile	Ala	Gly	Asp	50	55	60	
Asp	Pro	Pro	Ala	Ser	Cys	Val	Phe	Ser	Gln	Val	Met	Asn	Met	Ala	65	70	75	
Ala	Phe	Leu	Ala	Leu	Val	Val	Ala	Val	Leu	Arg	Phe	Ile	Gln	Leu	80	85	90	
Lys	Pro	Lys	Val	Leu	Asn	Pro	Trp	Leu	Asn	Ile	Ser	Gly	Leu	Val	95	100	105	

Ala	Leu	Cys	Leu	Ala	Ser	Phe	Gly	Met	Thr	Leu	Leu	Gly	Asn	Phe
			110							115				120
Gln	Leu	Thr	Asn	Asp	Glu	Glu	Ile	His	Asn	Val	Gly	Thr	Ser	Leu
			125							130				135
Thr	Phe	Gly	Phe	Gly	Thr	Leu	Thr	Cys	Trp	Ile	Gln	Ala	Ala	Leu
			140							145				150
Thr	Leu	Lys	Val	Asn	Ile	Lys	Asn	Glu	Gly	Arg	Arg	Val	Gly	Ile
			155							160				165
Pro	Arg	Val	Ile	Leu	Ser	Ala	Ser	Ile	Thr	Leu	Cys	Val	Val	Leu
			170							175				180
Tyr	Phe	Ile	Leu	Met	Ala	Gln	Ser	Ile	His	Met	Tyr	Ala	Ala	Arg
			185							190				195
Val	Gln	Trp	Gly	Leu	Val	Met	Cys	Phe	Leu	Ser	Tyr	Phe	Gly	Thr
			200							205				210
Phe	Ala	Val	Glu	Phe	Arg	His	Tyr	Arg	Tyr	Glu	Ile	Val	Cys	Ser
			215							220				225
Glu	Tyr	Gln	Glu	Asn	Phe	Leu	Ser	Phe	Ser	Glu	Ser	Leu	Ser	Glu
			230							235				240
Ala	Ser	Glu	Tyr	Gln	Thr	Asp	Gln	Val						
			245											

<210> 38
 <211> 145
 <212> PRT
 <213> Homo sapien

<400> 38

Met	Glu	Leu	Ala	Leu	Leu	Cys	Gly	Leu	Val	Val	Met	Ala	Gly	Val
1				5					10					15
Ile	Pro	Ile	Gln	Gly	Gly	Ile	Leu	Asn	Leu	Asn	Lys	Met	Val	Lys
			20						25					30
Gln	Val	Thr	Gly	Lys	Met	Pro	Ile	Leu	Ser	Tyr	Trp	Pro	Tyr	Gly
			35						40					45
Cys	His	Cys	Gly	Leu	Gly	Gly	Arg	Gly	Gln	Pro	Lys	Asp	Ala	Thr
			50						55					60
Asp	Trp	Cys	Cys	Gln	Thr	His	Asp	Cys	Cys	Tyr	Asp	His	Leu	Lys
			65						70					75
Thr	Gln	Gly	Cys	Gly	Ile	Tyr	Lys	Asp	Tyr	Tyr	Arg	Tyr	Asn	Phe
			80						85					90
Ser	Gln	Gly	Asn	Ile	His	Cys	Ser	Asp	Lys	Gly	Ser	Trp	Cys	Glu
			95						100					105
Gln	Gln	Leu	Cys	Ala	Cys	Asp	Lys	Glu	Val	Ala	Phe	Cys	Leu	Lys

110	115	120
Arg Asn Leu Asp Thr Tyr Gln Lys Arg	Leu Arg Phe Tyr Trp Arg	
125	130	135
Pro His Cys Arg Gly Gln Thr Pro Gly Cys		
140	145	
<210> 39		
<211> 1533		
<212> PRT		
<213> Homo sapien		
<400> 39		
Met Tyr Ile Arg Val Ser Tyr Asp Thr Lys Pro Asp Ser Leu Leu		
1	5	10 15
His Leu Met Val Lys Asp Trp Gln Leu Glu Leu Pro Lys Leu Leu		
20	25	30
Ile Ser Val His Gly Gly Leu Gln Asn Phe Glu Met Gln Pro Lys		
35	40	45
Leu Lys Gln Val Phe Gly Lys Gly Leu Ile Lys Ala Ala Met Thr		
50	55	60
Thr Gly Ala Trp Ile Phe Thr Gly Gly Val Ser Thr Gly Val Ile		
65	70	75
Ser His Val Gly Asp Ala Leu Lys Asp His Ser Ser Lys Ser Arg		
80	85	90
Gly Arg Val Cys Ala Ile Gly Ile Ala Pro Trp Gly Ile Val Glu		
95	100	105
Asn Lys Glu Asp Leu Val Gly Lys Asp Val Thr Arg Val Tyr Gln		
110	115	120
Thr Met Ser Asn Pro Leu Ser Lys Leu Ser Val Leu Asn Asn Ser		
125	130	135
His Thr His Phe Ile Leu Ala Asp Asn Gly Thr Leu Gly Lys Tyr		
140	145	150
Gly Ala Glu Val Lys Leu Arg Arg Leu Leu Glu Lys His Ile Ser		
155	160	165
Leu Gln Lys Ile Asn Thr Arg Leu Gly Gln Gly Val Pro Leu Val		
170	175	180
Gly Leu Val Val Glu Gly Gly Pro Asn Val Val Ser Ile Val Leu		
185	190	195
Glu Tyr Leu Gln Glu Glu Pro Pro Ile Pro Val Val Ile Cys Asp		
200	205	210
Gly Ser Gly Arg Ala Ser Asp Ile Leu Ser Phe Ala His Lys Tyr		
215	220	225

Cys	Glu	Glu	Gly	Gly	Ile	Ile	Asn	Glu	Ser	Leu	Arg	Glu	Gln	Leu	230	235	240
Leu	Val	Thr	Ile	Gln	Lys	Thr	Phe	Asn	Tyr	Asn	Lys	Ala	Gln	Ser	245	250	255
His	Gln	Leu	Phe	Ala	Ile	Ile	Met	Glu	Cys	Met	Lys	Lys	Lys	Glu	260	265	270
Leu	Val	Thr	Val	Phe	Arg	Met	Gly	Ser	Glu	Gly	Gln	Gln	Asp	Ile	275	280	285
Glu	Met	Ala	Ile	Leu	Thr	Ala	Leu	Leu	Lys	Gly	Thr	Asn	Val	Ser	290	295	300
Ala	Pro	Asp	Gln	Leu	Ser	Leu	Ala	Leu	Ala	Trp	Asn	Arg	Val	Asp	305	310	315
Ile	Ala	Arg	Ser	Gln	Ile	Phe	Val	Phe	Gly	Pro	His	Trp	Thr	Pro	320	325	330
Leu	Gly	Ser	Leu	Ala	Pro	Pro	Thr	Asp	Ser	Lys	Ala	Thr	Glu	Lys	335	340	345
Glu	Lys	Lys	Pro	Pro	Met	Ala	Thr	Thr	Lys	Gly	Gly	Arg	Gly	Lys	350	355	360
Gly	Lys	Gly	Lys	Lys	Lys	Gly	Lys	Val	Lys	Glu	Glu	Val	Glu	Glu	365	370	375
Glu	Thr	Asp	Pro	Arg	Lys	Ile	Glu	Leu	Leu	Asn	Trp	Val	Asn	Ala	380	385	390
Leu	Glu	Gln	Ala	Met	Leu	Asp	Ala	Leu	Val	Leu	Asp	Arg	Val	Asp	395	400	405
Phe	Val	Lys	Leu	Leu	Ile	Glu	Asn	Gly	Val	Asn	Met	Gln	His	Phe	410	415	420
Leu	Thr	Ile	Pro	Arg	Leu	Glu	Glu	Leu	Tyr	Asn	Thr	Arg	Leu	Gly	425	430	435
Pro	Pro	Asn	Thr	Leu	His	Leu	Leu	Val	Arg	Asp	Val	Lys	Lys	Ser	440	445	450
Asn	Leu	Pro	Pro	Asp	Tyr	His	Ile	Ser	Leu	Ile	Asp	Ile	Gly	Leu	455	460	465
Val	Leu	Glu	Tyr	Leu	Met	Gly	Gly	Ala	Tyr	Arg	Cys	Asn	Tyr	Thr	470	475	480
Arg	Lys	Asn	Phe	Arg	Thr	Leu	Tyr	Asn	Asn	Leu	Phe	Gly	Pro	Lys	485	490	495
Arg	Pro	Lys	Ala	Leu	Lys	Leu	Leu	Gly	Met	Glu	Asp	Asp	Glu	Pro	500	505	510
Pro	Ala	Lys	Gly	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Glu	Glu	Glu			

515					520					525				
Ile	Asp	Ile	Asp	Val	Asp	Asp	Pro	Ala	Val	Ser	Arg	Phe	Gln	Tyr
				530					535					540
Pro	Phe	His	Glu	Leu	Met	Val	Trp	Ala	Val	Leu	Met	Lys	Arg	Gln
				545					550					555
Lys	Met	Ala	Val	Phe	Leu	Trp	Gln	Arg	Gly	Glu	Glu	Ser	Met	Ala
				560					565					570
Lys	Ala	Leu	Val	Ala	Cys	Lys	Leu	Tyr	Lys	Ala	Met	Ala	His	Glu
				575					580					585
Ser	Ser	Glu	Ser	Asp	Leu	Val	Asp	Asp	Ile	Ser	Gln	Asp	Leu	Asp
				590					595					600
Asn	Asn	Ser	Lys	Asp	Phe	Gly	Gln	Leu	Ala	Leu	Glu	Leu	Leu	Asp
				605					610					615
Gln	Ser	Tyr	Lys	His	Asp	Glu	Gln	Ile	Ala	Met	Lys	Leu	Leu	Thr
				620					625					630
Tyr	Glu	Leu	Lys	Asn	Trp	Ser	Asn	Ser	Thr	Cys	Leu	Lys	Leu	Ala
				635					640					645
Val	Ala	Ala	Lys	His	Arg	Asp	Phe	Ile	Ala	His	Thr	Cys	Ser	Gln
				650					655					660
Met	Leu	Leu	Thr	Asp	Met	Trp	Met	Gly	Arg	Leu	Arg	Met	Arg	Lys
				665					670					675
Asn	Pro	Gly	Leu	Lys	Val	Ile	Met	Gly	Ile	Leu	Leu	Pro	Pro	Thr
				680					685					690
Ile	Leu	Phe	Leu	Glu	Phe	Arg	Thr	Tyr	Asp	Asp	Phe	Ser	Tyr	Gln
				695					700					705
Thr	Ser	Lys	Glu	Asn	Glu	Asp	Gly	Lys	Glu	Lys	Glu	Glu	Glu	Asn
				710					715					720
Thr	Asp	Ala	Asn	Ala	Asp	Ala	Gly	Ser	Arg	Lys	Gly	Asp	Glu	Glu
				725					730					735
Asn	Glu	His	Lys	Lys	Gln	Arg	Ser	Ile	Pro	Ile	Gly	Thr	Lys	Ile
				740					745					750
Cys	Glu	Phe	Tyr	Asn	Ala	Pro	Ile	Val	Lys	Phe	Trp	Phe	Tyr	Thr
				755					760					765
Ile	Ser	Tyr	Leu	Gly	Tyr	Leu	Leu	Leu	Phe	Asn	Tyr	Val	Ile	Leu
				770					775					780
Val	Arg	Met	Asp	Gly	Trp	Pro	Ser	Leu	Gln	Glu	Trp	Ile	Val	Ile
				785					790					795
Ser	Tyr	Ile	Val	Ser	Leu	Ala	Leu	Glu	Lys	Ile	Arg	Glu	Ile	Leu
				800					805					810

Met Ser Glu Pro Gly Lys Leu Ser Gln Lys Ile Lys Val Trp Leu	815	820	825
Gln Glu Tyr Trp Asn Ile Thr Asp Leu Val Ala Ile Ser Thr Phe	830	835	840
Met Ile Gly Ala Ile Leu Arg Leu Gln Asn Gln Pro Tyr Met Gly	845	850	855
Tyr Gly Arg Val Ile Tyr Cys Val Asp Ile Ile Phe Trp Tyr Ile	860	865	870
Arg Val Leu Asp Ile Phe Gly Val Asn Lys Tyr Leu Gly Pro Tyr	875	880	885
Val Met Met Ile Gly Lys Met Met Ile Asp Met Leu Tyr Phe Val	890	895	900
Val Ile Met Leu Val Val Leu Met Ser Phe Gly Val Ala Arg Gln	905	910	915
Ala Ile Leu His Pro Glu Glu Lys Pro Ser Trp Lys Leu Ala Arg	920	925	930
Asn Ile Phe Tyr Met Pro Tyr Trp Met Ile Tyr Gly Glu Val Phe	935	940	945
Ala Asp Gln Ile Asp Leu Tyr Ala Met Glu Ile Asn Pro Pro Cys	950	955	960
Gly Glu Asn Leu Tyr Asp Glu Glu Gly Lys Arg Leu Pro Pro Cys	965	970	975
Ile Pro Gly Ala Trp Leu Thr Pro Ala Leu Met Ala Cys Tyr Leu	980	985	990
Leu Val Ala Asn Ile Leu Leu Val Asn Leu Leu Ile Ala Val Phe	995	1000	1005
Asn Asn Thr Phe Phe Glu Val Lys Ser Ile Ser Asn Gln Val Trp	1010	1015	1020
Lys Phe Gln Arg Tyr Gln Leu Ile Met Thr Phe His Asp Arg Pro	1025	1030	1035
Val Leu Pro Pro Pro Met Ile Ile Leu Ser His Ile Tyr Ile Ile	1040	1045	1050
Ile Met Arg Leu Ser Gly Arg Cys Arg Lys Lys Arg Glu Gly Asp	1055	1060	1065
Gln Glu Glu Arg Asp Arg Gly Leu Lys Leu Phe Leu Ser Asp Glu	1070	1075	1080
Glu Leu Lys Arg Leu His Glu Phe Glu Glu Gln Cys Val Gln Glu	1085	1090	1095
His Phe Arg Glu Lys Glu Asp Glu Gln Gln Ser Ser Ser Asp Glu			

1100	1105	1110
Arg Ile Arg Val Thr Ser Glu Arg Val Glu Asn Met Ser Met Arg 1115	1120	1125
Leu Glu Glu Ile Asn Glu Arg Glu Thr Phe Met Lys Thr Ser Leu 1130	1135	1140
Gln Thr Val Asp Leu Arg Leu Ala Gln Leu Glu Glu Leu Ser Asn 1145	1150	1155
Arg Met Val Asn Ala Leu Glu Asn Leu Ala Gly Ile Asp Arg Ser 1160	1165	1170
Asp Leu Ile Gln Ala Arg Ser Arg Ala Ser Ser Glu Cys Glu Ala 1175	1180	1185
Thr Tyr Leu Leu Arg Gln Ser Ser Ile Asn Ser Ala Asp Gly Tyr 1190	1195	1200
Ser Leu Tyr Arg Tyr His Phe Asn Gly Glu Glu Leu Leu Phe Glu 1205	1210	1215
Asp Thr Ser Leu Ser Thr Ser Pro Gly Thr Gly Val Arg Lys Lys 1220	1225	1230
Thr Cys Ser Phe Arg Ile Lys Glu Glu Lys Asp Val Lys Thr His 1235	1240	1245
Leu Val Pro Glu Cys Gln Asn Ser Leu His Leu Ser Leu Gly Thr 1250	1255	1260
Ser Thr Ser Ala Thr Pro Asp Gly Ser His Leu Ala Val Asp Asp 1265	1270	1275
Leu Lys Asn Ala Glu Glu Ser Lys Leu Gly Pro Asp Ile Gly Ile 1280	1285	1290
Ser Lys Glu Asp Asp Glu Arg Gln Thr Asp Ser Lys Lys Glu Glu 1295	1300	1305
Thr Ile Ser Pro Ser Leu Asn Lys Thr Asp Val Ile His Gly Gln 1310	1315	1320
Asp Lys Ser Asp Val Gln Asn Thr Gln Leu Thr Val Glu Thr Thr 1325	1330	1335
Asn Ile Glu Gly Thr Ile Ser Tyr Pro Leu Glu Glu Thr Lys Ile 1340	1345	1350
Thr Arg Tyr Phe Pro Asp Glu Thr Ile Asn Ala Cys Lys Thr Met 1355	1360	1365
Lys Ser Arg Ser Phe Val Tyr Ser Arg Gly Arg Lys Leu Val Gly 1370	1375	1380
Gly Val Asn Gln Asp Val Glu Tyr Ser Ser Ile Thr Asp Gln Gln 1385	1390	1395

Leu Thr Thr Glu Trp Gln Cys Gln Val Gln Lys Ile Thr Arg Ser
 1400 1405 1410
 His Ser Thr Asp Ile Pro Tyr Ile Val Ser Glu Ala Ala Val Gln
 1415 1420 1425
 Ala Glu Gln Lys Glu Gln Phe Ala Asp Met Gln Asp Glu His His
 1430 1435 1440
 Val Ala Glu Ala Ile Pro Arg Ile Pro Arg Leu Ser Leu Thr Ile
 1445 1450 1455
 Thr Asp Arg Asn Gly Met Glu Asn Leu Leu Ser Val Lys Pro Asp
 1460 1465 1470
 Gln Thr Leu Gly Phe Pro Ser Leu Arg Ser Lys Ser Leu His Gly
 1475 1480 1485
 His Pro Arg Asn Val Lys Ser Ile Gln Gly Lys Leu Asp Arg Ser
 1490 1495 1500
 Gly His Ala Ser Ser Val Ser Ser Leu Val Ile Val Ser Gly Met
 1505 1510 1515
 Thr Ala Glu Glu Lys Lys Val Lys Lys Glu Lys Ala Ser Thr Glu
 1520 1525 1530

Thr Glu Cys

<210> 40
 <211> 462
 <212> PRT
 <213> Homo sapien

<400> 40
 Met Ser Thr Glu Lys Val Asp Gln Lys Glu Glu Ala Gly Glu Lys
 1 5 10 15
 Glu Val Cys Gly Asp Gln Ile Lys Gly Pro Asp Lys Glu Glu Glu
 20 25 30
 Pro Pro Ala Ala Ala Ser His Gly Gln Gly Trp Arg Pro Gly Gly
 35 40 45
 Arg Ala Ala Arg Asn Ala Arg Pro Glu Pro Gly Ala Arg His Pro
 50 55 60
 Ala Leu Pro Ala Met Val Asn Asp Pro Pro Val Pro Ala Leu Leu
 65 70 75
 Trp Ala Gln Glu Val Gly Gln Val Leu Ala Gly Arg Ala Arg Arg
 80 85 90
 Leu Leu Leu Gln Phe Gly Val Leu Phe Cys Thr Ile Leu Leu Leu
 95 100 105
 Leu Trp Val Ser Val Phe Leu Tyr Gly Ser Phe Tyr Tyr Ser Tyr

110					115					120				
Met	Pro	Thr	Val	Ser	His	Leu	Ser	Pro	Val	His	Phe	Tyr	Tyr	Arg
				125					130					135
Thr	Asp	Cys	Asp	Ser	Ser	Thr	Thr	Ser	Leu	Cys	Ser	Phe	Pro	Val
				140					145					150
Ala	Asn	Val	Ser	Leu	Thr	Lys	Gly	Gly	Arg	Asp	Arg	Val	Leu	Met
				155					160					165
Tyr	Gly	Gln	Pro	Tyr	Arg	Val	Thr	Leu	Glu	Leu	Glu	Leu	Pro	Glu
				170					175					180
Ser	Pro	Val	Asn	Gln	Asp	Leu	Gly	Met	Phe	Leu	Val	Thr	Ile	Ser
				185					190					195
Cys	Tyr	Thr	Arg	Gly	Gly	Arg	Ile	Ile	Ser	Thr	Ser	Ser	Arg	Ser
				200					205					210
Val	Met	Leu	His	Tyr	Arg	Ser	Asp	Leu	Leu	Gln	Met	Leu	Asp	Thr
				215					220					225
Leu	Val	Phe	Ser	Ser	Leu	Leu	Leu	Phe	Gly	Phe	Ala	Glu	Gln	Lys
				230					235					240
Gln	Leu	Leu	Glu	Val	Glu	Leu	Tyr	Ala	Asp	Tyr	Arg	Glu	Asn	Ser
				245					250					255
Tyr	Val	Pro	Thr	Thr	Gly	Ala	Ile	Ile	Glu	Ile	His	Ser	Lys	Arg
				260					265					270
Ile	Gln	Leu	Tyr	Gly	Ala	Tyr	Leu	Arg	Ile	His	Ala	His	Phe	Thr
				275					280					285
Gly	Leu	Arg	Tyr	Leu	Leu	Tyr	Asn	Phe	Pro	Met	Thr	Cys	Ala	Phe
				290					295					300
Ile	Gly	Val	Ala	Ser	Asn	Phe	Thr	Phe	Leu	Ser	Val	Ile	Val	Leu
				305					310					315
Phe	Ser	Tyr	Met	Gln	Trp	Val	Trp	Gly	Gly	Ile	Trp	Pro	Arg	His
				320					325					330
Arg	Phe	Ser	Leu	Gln	Val	Asn	Ile	Arg	Lys	Arg	Asp	Asn	Ser	Arg
				335					340					345
Lys	Glu	Val	Gln	Arg	Arg	Ile	Ser	Ala	His	Gln	Pro	Gly	Pro	Glu
				350					355					360
Gly	Gln	Glu	Glu	Ser	Thr	Pro	Gln	Ser	Asp	Val	Thr	Glu	Asp	Gly
				365					370					375
Glu	Ser	Pro	Glu	Asp	Pro	Ser	Gly	Thr	Glu	Gly	Gln	Leu	Ser	Glu
				380					385					390
Glu	Glu	Lys	Pro	Asp	Gln	Gln	Pro	Leu	Ser	Gly	Glu	Glu	Glu	Leu
				395					400					405

Glu	Pro	Glu	Ala	Ser	Asp	Gly	Ser	Gly	Ser	Trp	Glu	Asp	Ala	Ala	
				410					415					420	
Leu	Leu	Thr	Glu	Ala	Asn	Leu	Pro	Ala	Pro	Ala	Pro	Ala	Ser	Ala	
				425					430					435	
Ser	Ala	Pro	Val	Leu	Glu	Thr	Leu	Gly	Ser	Ser	Glu	Pro	Ala	Gly	
				440					445					450	
Gly	Ala	Leu	Arg	Gln	Arg	Pro	Thr	Cys	Ser	Ser	Ser				
				455					460						

<210> 41
 <211> 1015
 <212> PRT
 <213> Homo sapien

Met	Gly	Pro	Pro	Leu	Pro	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	
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Pro	Pro	Arg	Val	Leu	Pro	Ala	Ala	Pro	Ser	Ser	Val	Pro	Arg	Gly	
				20					25					30	
Arg	Gln	Leu	Pro	Gly	Arg	Leu	Gly	Cys	Leu	Leu	Glu	Glu	Gly	Leu	
				35					40					45	
Cys	Gly	Ala	Ser	Glu	Ala	Cys	Val	Asn	Asp	Gly	Val	Phe	Gly	Arg	
				50					55					60	
Cys	Gln	Lys	Val	Pro	Ala	Met	Asp	Phe	Tyr	Arg	Tyr	Glu	Val	Ser	
				65					70					75	
Pro	Val	Ala	Leu	Gln	Arg	Leu	Arg	Val	Ala	Leu	Gln	Lys	Leu	Ser	
				80					85					90	
Gly	Thr	Gly	Phe	Thr	Trp	Gln	Asp	Asp	Tyr	Thr	Gln	Tyr	Val	Met	
				95					100					105	
Asp	Gln	Glu	Leu	Ala	Asp	Leu	Pro	Lys	Thr	Tyr	Leu	Arg	Arg	Pro	
				110					115					120	
Glu	Ala	Ser	Ser	Pro	Ala	Arg	Pro	Ser	Lys	His	Ser	Val	Gly	Ser	
				125					130					135	
Glu	Arg	Arg	Tyr	Ser	Arg	Glu	Gly	Gly	Ala	Ala	Leu	Ala	Asn	Ala	
				140					145					150	
Leu	Arg	Arg	His	Leu	Pro	Phe	Leu	Glu	Ala	Leu	Ser	Gln	Ala	Pro	
				155					160					165	
Ala	Ser	Asp	Val	Leu	Ala	Arg	Thr	His	Thr	Ala	Gln	Asp	Arg	Pro	
				170					175					180	
Pro	Ala	Glu	Gly	Asp	Asp	Arg	Phe	Ser	Glu	Ser	Ile	Leu	Thr	Tyr	
				185					190					195	
Val	Ala	His	Thr	Ser	Ala	Leu	Thr	Tyr	Pro	Pro	Gly	Pro	Arg	Thr	

200					205					210				
Gln	Leu	Arg	Glu	Asp	Leu	Leu	Pro	Arg	Thr	Leu	Gly	Gln	Leu	Gln
				215					220					225
Pro	Asp	Glu	Leu	Ser	Pro	Lys	Val	Asp	Ser	Gly	Val	Asp	Arg	His
				230					235					240
His	Leu	Met	Ala	Ala	Leu	Ser	Ala	Tyr	Ala	Ala	Gln	Arg	Pro	Pro
				245					250					255
Ala	Pro	Pro	Gly	Glu	Gly	Ser	Leu	Glu	Pro	Gln	Tyr	Leu	Leu	Arg
				260					265					270
Ala	Pro	Ser	Arg	Met	Pro	Arg	Pro	Leu	Leu	Ala	Pro	Ala	Ala	Pro
				275					280					285
Gln	Lys	Trp	Pro	Ser	Pro	Leu	Gly	Asp	Ser	Glu	Asp	Pro	Ser	Ser
				290					295					300
Thr	Gly	Asp	Gly	Ala	Arg	Ile	His	Thr	Leu	Leu	Lys	Asp	Leu	Gln
				305					310					315
Arg	Gln	Pro	Ala	Glu	Val	Arg	Gly	Leu	Ser	Gly	Leu	Glu	Leu	Asp
				320					325					330
Gly	Met	Ala	Glu	Leu	Met	Ala	Gly	Leu	Met	Gln	Gly	Val	Asp	His
				335					340					345
Gly	Val	Ala	Arg	Gly	Ser	Pro	Gly	Arg	Ala	Ala	Leu	Gly	Glu	Ser
				350					355					360
Gly	Glu	Gln	Ala	Asp	Gly	Pro	Lys	Ala	Thr	Leu	Arg	Gly	Asp	Ser
				365					370					375
Phe	Pro	Asp	Asp	Gly	Val	Gln	Asp	Asp	Asp	Asp	Arg	Leu	Tyr	Gln
				380					385					390
Glu	Val	His	Arg	Leu	Ser	Ala	Thr	Leu	Gly	Gly	Leu	Leu	Gln	Asp
				395					400					405
His	Gly	Ser	Arg	Leu	Leu	Pro	Gly	Ala	Leu	Pro	Phe	Ala	Arg	Pro
				410					415					420
Leu	Asp	Met	Glu	Arg	Lys	Lys	Ser	Glu	His	Pro	Glu	Ser	Ser	Leu
				425					430					435
Ser	Ser	Glu	Glu	Glu	Thr	Ala	Gly	Val	Glu	Asn	Val	Lys	Ser	Gln
				440					445					450
Thr	Tyr	Ser	Lys	Asp	Leu	Leu	Gly	Gln	Gln	Pro	His	Ser	Glu	Pro
				455					460					465
Gly	Ala	Ala	Ala	Phe	Gly	Glu	Leu	Gln	Asn	Gln	Met	Pro	Gly	Pro
				470					475					480
Ser	Lys	Glu	Glu	Gln	Ser	Leu	Pro	Ala	Gly	Ala	Gln	Glu	Ala	Leu
				485					490					495

Ser Asp Gly Leu	Gln Leu Glu Val	Gln Pro Ser Glu Glu Glu	Ala
500		505	510
Arg Gly Tyr Ile	Val Thr Asp Arg Asp	Pro Leu Arg Pro Glu	Glu
515		520	525
Gly Arg Arg Leu	Val Glu Asp Val Ala	Arg Leu Leu Gln Val	Pro
530		535	540
Ser Ser Ala Phe	Ala Asp Val Glu Val	Leu Gly Pro Ala Val	Thr
545		550	555
Phe Lys Val Ser	Ala Asn Val Gln Asn	Val Thr Thr Glu Asp	Val
560		565	570
Glu Lys Ala Thr	Val Asp Asn Lys Asp	Lys Leu Glu Glu Thr	Ser
575		580	585
Gly Leu Lys Ile	Leu Gln Thr Gly Val	Gly Ser Lys Ser Lys	Leu
590		595	600
Lys Phe Leu Pro	Pro Gln Ala Glu Gln	Glu Asp Ser Thr Lys	Phe
605		610	615
Ile Ala Leu Thr	Leu Val Ser Leu Ala	Cys Ile Leu Gly Val	Leu
620		625	630
Leu Ala Ser Gly	Leu Ile Tyr Cys Leu	Arg His Ser Ser Gln	His
635		640	645
Arg Leu Lys Glu	Lys Leu Ser Gly Leu	Gly Gly Asp Pro Gly	Ala
650		655	660
Asp Ala Thr Ala	Ala Tyr Gln Glu Leu	Cys Arg Gln Arg Met	Ala
665		670	675
Thr Arg Pro Pro	Asp Arg Pro Glu Gly	Pro His Thr Ser Arg	Ile
680		685	690
Ser Ser Val Ser	Ser Gln Phe Ser Asp	Gly Pro Ile Pro Ser	Pro
695		700	705
Ser Ala Arg Ser	Ser Ala Ser Ser Trp	Ser Glu Glu Pro Val	Gln
710		715	720
Ser Asn Met Asp	Ile Ser Thr Gly His	Met Ile Leu Ser Tyr	Met
725		730	735
Glu Asp His Leu	Lys Asn Lys Asn Arg	Leu Glu Lys Glu Trp	Glu
740		745	750
Ala Leu Cys Ala	Tyr Gln Ala Glu Pro	Asn Ser Ser Phe Val	Ala
755		760	765
Gln Arg Glu Glu	Asn Val Pro Lys Asn	Arg Ser Leu Ala Val	Leu
770		775	780
Thr Tyr Asp His	Ser Arg Val Leu Leu	Lys Ala Glu Asn Ser	His

	785	790	795
Ser His Ser Asp	Tyr Ile Asn Ala Ser	Pro Ile Met Asp His Asp	
	800	805	810
Pro Arg Asn Pro	Ala Tyr Ile Ala Thr	Gln Gly Pro Leu Pro Ala	
	815	820	825
Thr Val Ala Asp	Phe Trp Gln Met Val	Trp Glu Ser Gly Cys Val	
	830	835	840
Val Ile Val Met	Leu Thr Pro Leu Ala	Glu Asn Gly Val Arg Gln	
	845	850	855
Cys Tyr His Tyr	Trp Pro Asp Glu Gly	Ser Asn Leu Tyr His Ile	
	860	865	870
Tyr Glu Val Asn	Leu Val Ser Glu His	Ile Trp Cys Glu Asp Phe	
	875	880	885
Leu Val Arg Ser	Phe Tyr Leu Lys Asn	Leu Gln Thr Asn Glu Thr	
	890	895	900
Arg Thr Val Thr	Gln Phe His Phe Leu	Ser Trp Tyr Asp Arg Gly	
	905	910	915
Val Pro Ser Ser	Ser Arg Ser Leu Leu	Asp Phe Arg Arg Lys Val	
	920	925	930
Asn Lys Cys Tyr	Arg Gly Arg Ser Cys	Pro Ile Ile Val His Cys	
	935	940	945
Ser Asp Gly Ala	Gly Arg Ser Gly Thr	Tyr Val Leu Ile Asp Met	
	950	955	960
Val Leu Asn Lys	Met Ala Lys Gly Ala	Lys Glu Ile Asp Ile Ala	
	965	970	975
Ala Thr Leu Glu	His Leu Arg Asp Gln	Arg Pro Gly Met Val Gln	
	980	985	990
Thr Lys Glu Gln	Phe Glu Phe Ala Leu	Thr Ala Val Ala Glu Glu	
	995	1000	1005
Val Asn Ala Ile	Leu Lys Ala Leu Pro	Gln	
	1010	1015	

<210> 42
 <211> 442
 <212> PRT
 <213> Homo sapien

<400> 42
 Met Gln Pro Pro Pro Ser Leu Cys Gly Arg Ala Leu Val Ala Leu
 1 5 10 15
 Val Leu Ala Cys Gly Leu Ser Arg Ile Trp Gly Glu Glu Arg Gly
 20 25 30

Phe	Pro	Pro	Asp	Arg	Ala	Thr	Pro	Leu	Leu	Gln	Thr	Ala	Glu	Ile			
				35					40					45			
Met	Thr	Pro	Pro	Thr	Lys	Thr	Leu	Trp	Pro	Lys	Gly	Ser	Asn	Ala			
				50					55					60			
Ser	Leu	Ala	Arg	Ser	Leu	Ala	Pro	Ala	Glu	Val	Pro	Lys	Gly	Asp			
				65					70					75			
Arg	Thr	Ala	Gly	Ser	Pro	Pro	Arg	Thr	Ile	Ser	Pro	Pro	Pro	Cys			
				80					85					90			
Gln	Gly	Pro	Ile	Glu	Ile	Lys	Glu	Thr	Phe	Lys	Tyr	Ile	Asn	Thr			
				95					100					105			
Val	Val	Ser	Cys	Leu	Val	Phe	Val	Leu	Gly	Ile	Ile	Gly	Asn	Ser			
				110					115					120			
Thr	Leu	Leu	Arg	Ile	Ile	Tyr	Lys	Asn	Lys	Cys	Met	Arg	Asn	Gly			
				125					130					135			
Pro	Asn	Ile	Leu	Ile	Ala	Ser	Leu	Ala	Leu	Gly	Asp	Leu	Leu	His			
				140					145					150			
Ile	Val	Ile	Asp	Ile	Pro	Ile	Asn	Val	Tyr	Lys	Leu	Leu	Ala	Glu			
				155					160					165			
Asp	Trp	Pro	Phe	Gly	Ala	Glu	Met	Cys	Lys	Leu	Val	Pro	Phe	Ile			
				170					175					180			
Gln	Lys	Ala	Ser	Val	Gly	Ile	Thr	Val	Leu	Ser	Leu	Cys	Ala	Leu			
				185					190					195			
Ser	Ile	Asp	Arg	Tyr	Arg	Ala	Val	Ala	Ser	Trp	Ser	Arg	Ile	Lys			
				200					205					210			
Gly	Ile	Gly	Val	Pro	Lys	Trp	Thr	Ala	Val	Glu	Ile	Val	Leu	Ile			
				215					220					225			
Trp	Val	Val	Ser	Val	Val	Leu	Ala	Val	Pro	Glu	Ala	Ile	Gly	Phe			
				230					235					240			
Asp	Ile	Ile	Thr	Met	Asp	Tyr	Lys	Gly	Ser	Tyr	Leu	Arg	Ile	Cys			
				245					250					255			
Leu	Leu	His	Pro	Val	Gln	Lys	Thr	Ala	Phe	Met	Gln	Phe	Tyr	Lys			
				260					265					270			
Thr	Ala	Lys	Asp	Trp	Trp	Leu	Phe	Ser	Phe	Tyr	Phe	Cys	Leu	Pro			
				275					280					285			
Leu	Ala	Ile	Thr	Ala	Phe	Phe	Tyr	Thr	Leu	Met	Thr	Cys	Glu	Met			
				290					295					300			
Leu	Arg	Lys	Lys	Ser	Gly	Met	Gln	Ile	Ala	Leu	Asn	Asp	His	Leu			
				305					310					315			
Lys	Gln	Arg	Arg	Glu	Val	Ala	Lys	Thr	Val	Phe	Cys	Leu	Val	Leu			

320										325					330				
Val	Phe	Ala	Leu	Cys	Trp	Leu	Pro	Leu	His	Leu	Ser	Arg	Ile	Leu					
				335					340					345					
Lys	Leu	Thr	Leu	Tyr	Asn	Gln	Asn	Asp	Pro	Asn	Arg	Cys	Glu	Leu					
				350					355					360					
Leu	Ser	Phe	Leu	Leu	Val	Leu	Asp	Tyr	Ile	Gly	Ile	Asn	Met	Ala					
				365					370					375					
Ser	Leu	Asn	Ser	Cys	Ile	Asn	Pro	Ile	Ala	Leu	Tyr	Leu	Val	Ser					
				380					385					390					
Lys	Arg	Phe	Lys	Asn	Cys	Phe	Lys	Ser	Cys	Leu	Cys	Cys	Trp	Cys					
				395					400					405					
Gln	Ser	Phe	Glu	Glu	Lys	Gln	Ser	Leu	Glu	Glu	Lys	Gln	Ser	Cys					
				410					415					420					
Leu	Lys	Phe	Lys	Ala	Asn	Asp	His	Gly	Tyr	Asp	Asn	Phe	Arg	Ser					
				425					430					435					
Ser	Asn	Lys	Tyr	Ser	Ser	Ser													
				440															